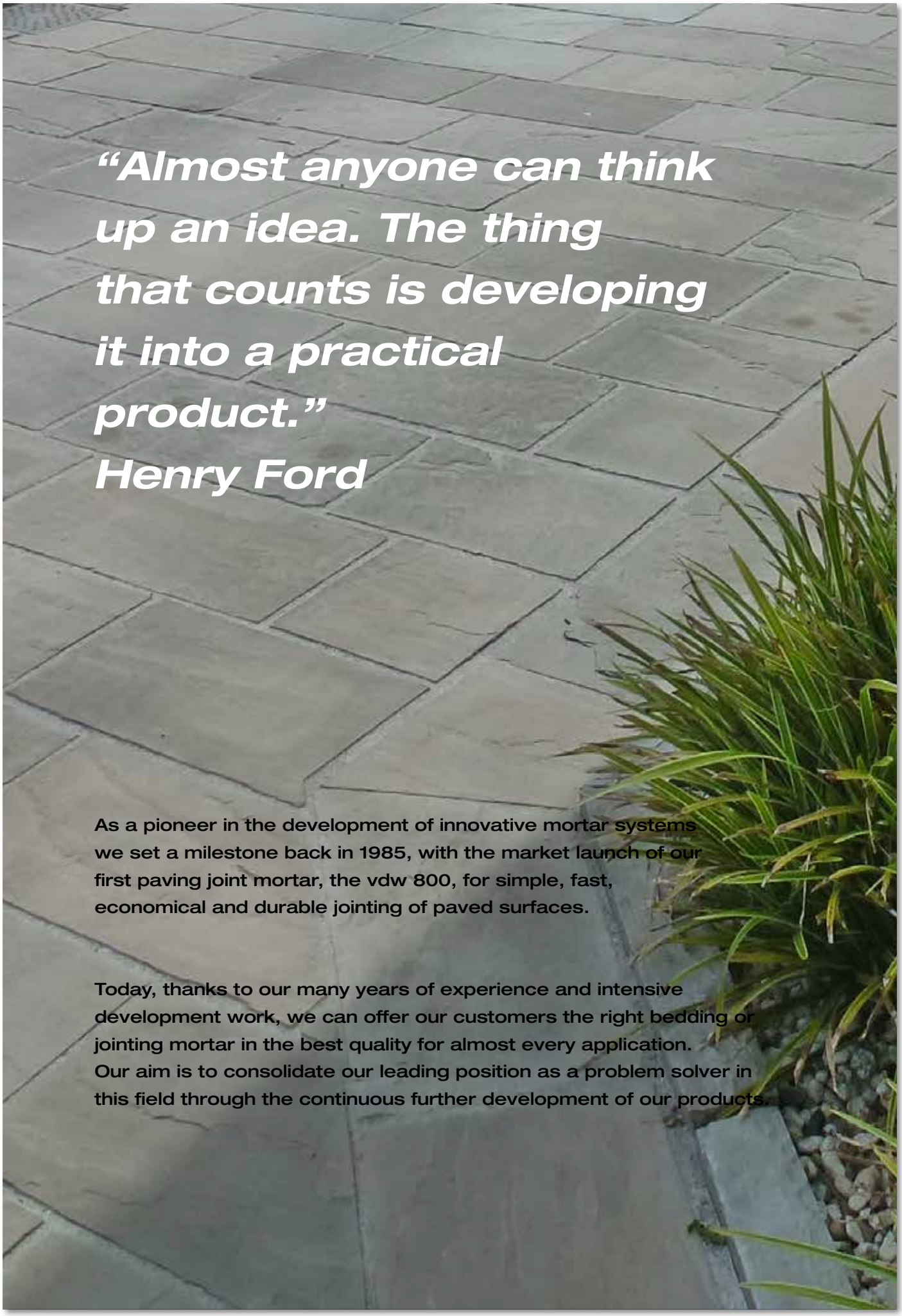


“Almost anyone can think up an idea. The thing that counts is developing it into a practical product.”
Henry Ford

As a pioneer in the development of innovative mortar systems we set a milestone back in 1985, with the market launch of our first paving joint mortar, the vdw 800, for simple, fast, economical and durable jointing of paved surfaces.

Today, thanks to our many years of experience and intensive development work, we can offer our customers the right bedding or jointing mortar in the best quality for almost every application. Our aim is to consolidate our leading position as a problem solver in this field through the continuous further development of our products.

Introduction



Gesellschaft für technische Kunststoffe mbH is the leading manufacturer of mortar systems for laying paving and slabs.
The range that follows comprises various bedding systems, many different jointing mortars and an extensive programme of accessories and complementary products. We also offer coating systems for traffic areas under the Colorout brand.



Since our foundation in 1971 we have specialised in the development, production and sale of high-quality construction chemicals for surfaces of every kind.
Since the market launch of the vdw 800, the world's first epoxy resin paving joint mortar, our product range has been developed continuously in line with new requirements. Our experience enables us to find the right solution for virtually every application.



To guarantee the excellent service our customers are used to, competent and experienced staff in our internal and field sales teams are available to all customers, contractors and interested parties.
We can also be reached by e-mail for technical and application questions.

Introduction



Together with our strong logistics partners we deliver our products within Germany in five working days – whether a single bucket or a whole lorry load.
In Europe and overseas, vdw mortar systems reach the customer by road haulage, sea container or air freight.



Our commitment to the environment and to sustainability is a firm part of our corporate strategy and is fully integrated into our daily business. Within the quality management system to ISO 9001 we work constantly on more sustainable and more energy-efficient production. All these measures serve one aim: to protect the environment and its resources.



In the GftK team, committed staff in research and development, production, application engineering, administration and sales work for vdw brand products. Each of them has their own particular skills; together they share the same passion and the same team spirit.
We are here for you!

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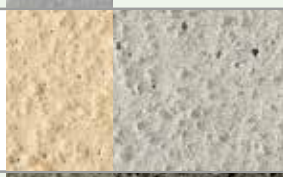
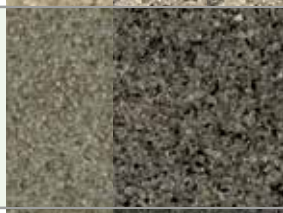
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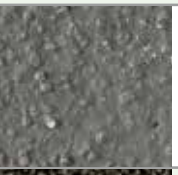
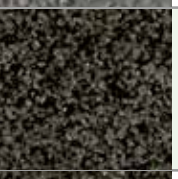
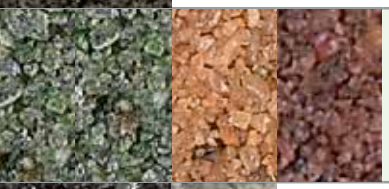
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Product overview

Product	Product description	Colours	
vdw 400 NEW **Water-impermeable,** cement-based, high-grade jointing mortar **Joint width 5 – 50 mm**	· **impermeable to water** · highly frost and de-icing salt resistant · abrasion resistant · very free flowing · easy to clean	· grey	
vdw 415 NEW **Water-impermeable,** cement-based, high-grade jointing mortar **Joint width 2 – 20 mm**	· **impermeable to water** · highly frost and de-icing salt resistant · abrasion resistant · very free flowing · easy to clean	· beige · grey · anthracite	
vdw 800 **2-component Paving Joint Mortar** epoxy resin based **Joint width from 5 mm**	· water permeable · highly frost and de-icing salt resistant · mechanical sweeper resistant · very free flowing	· natural · stone grey · basalt	
vdw 815 ultra NEW **2-component Slab Joint Mortar** epoxy resin based **Joint width from 4 mm**	· clean paved surfaces · water permeable · self-compacting · free flowing · mechanical sweeper resistant · abrasion resistant · highly frost and de-icing salt resistant · permanently filled joint · can be applied in rain and at low temperatures	· natural · stone grey · basalt	
vdw 830 Color **2-component Paving Joint Mortar** epoxy resin based **Joint width from 5 mm**	· water permeable · for coloured design of paving and slab joints · highly frost and de-icing salt resistant · abrasion resistant · very free flowing	· black · orange · green · yellow · red	
vdw 840 plus **1-component Jointing Mortar** polybutadiene based **Joint width 3–20 mm**	· water permeable · slurry in with water · ready to use, no mixing required · no manual re-compaction · surfaces almost free of binder film · **especially for factory-coated / impregnated concrete blocks** · suitable for ceramic terrace elements	· natural · stone grey · basalt · silver grey	
vdw 850 plus **2-component Jointing Mortar self-compacting** epoxy resin based **Joint width from 5 mm**	· water permeable · self-compacting · mechanical sweeper resistant · **can be applied in rain and at low temperatures** · almost no binder film · highly frost and de-icing salt resistant	· natural · stone grey · basalt	
vdw 855 **2-component Jointing Mortar highly compacting** epoxy resin based **Joint width from 8 mm**	· low water permeability · self-compacting · high compressive strength · mechanical sweeper resistant · almost no binder film · can be applied in rain and at low temperatures · highly frost and de-icing salt resistant	· sand · stone grey · basalt	

Please also ask about our other products for jointing natural stone and concrete block paving. Always observe our application instructions.

	Packaging	**Pedestrian loads** · Garden paths · Patios	**Light traffic loads** · Driveways · Yards with car traffic up to 3.5 t	**Medium traffic loads** · Cars and occasional lorry traffic · Access roads up to 20 t	**Heavy traffic loads** · Public roads
	· 25 kg bag	+++	+++	+++	+++
	· 15 kg bag	+++			
	· 25 kg bucket	+++	++		
	· 10 kg bucket	+++	+++		
	· 1 kg bottle each resin / hardener · 25 kg aggregate	+++	++		
	· 25 kg bucket ready-to-use jointing mortar · 12.5 kg bucket ready-to-use jointing mortar	+++			
	· 25 kg bucket	+++	+++	++	
	· 25 kg bucket	++	++	+++	+++

+++ – ideally suited ++ – well suited □ – not suitable

Product overview

water-permeable joint

Product	suitable for	special properties	Joint widths > 3 mm	> 4 mm	> 5 mm	> 8 mm
vdw 800		The classic among jointing mortars			✓	✓
plus vdw 815		Especially for thin-format paving	✓	✓	✓	✓
ultra vdw 815		Especially for thin-format paving		✓	✓	✓
vdw 830		For coloured joint design			✓	✓
plus vdw 840		Especially for concrete blocks with impregnated or sealed surfaces	✓	✓	✓	✓
plus vdw 850		Can be applied at low temperatures and in rain Very well suited for jointing polygonal slabs			✓	✓
vdw 855		Approved for public areas				✓

water-impermeable joint (cement jointing mortar)

Product	suitable for	special properties	Joint widths > 2 – 20 mm	> 5 – 50 mm
vdw 400		Very well suited for jointing polygonal slabs		✓
vdw 415		Especially for thin-format paving	✓	

 For pedestrian traffic only

 For light traffic loads

 For medium traffic loads

 For heavy traffic loads

vdw Mortar Systems

for concrete, natural stone, ceramic and clinker paving



Write to us:
contact@gftk-info.de
We are glad to support you with your project!

GftK

Quality for Professio

Innovations at GftK

vdw 415 – Cement Based Jointing Mortar Color



vdw 815 ultra – 2K Slab Joint Mortar



vdw VarioSand



vdw 885 plus – FugenFlex



Ideal for loose-laid slabs – also on pedestals



roll in vdw backer rod



vdw 885 plus apply



apply vdw smoothing agent



strike off excess

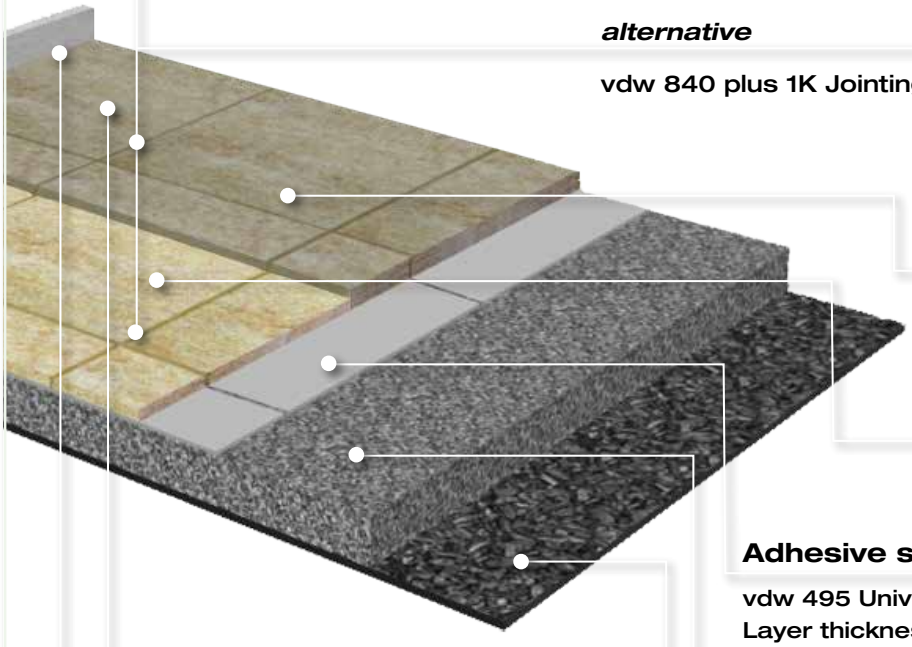
System build-up for slab paving

with water-permeable jointing

This build-up note is intended as a guide for the rigid laying and jointing of ceramic terrace elements at least 2 cm thick, or natural stone or concrete slabs at least 3 cm thick, with vdw mortar systems.



Recommended build-up for water-permeable jointing



Bound joint

vdw 815 ultra 2K Slab Joint Mortar



rainproof

alternative

vdw 840 plus 1K Jointing Mortar



Natural/concrete stone

Ceramic terrace elements

Adhesive slurry

vdw 495 Universal Adhesive Slurry
Layer thickness: 5 mm



MPA-tested

Stone protection

vdw 950 StoneProtect plus 3 in 1
for absorbent stone



Bound bedding

vdw 480 Bedding Compound
mix ratio 1:6–1:8, chippings 2/5 or 5/8
alternative:
vdw 470 Landscaping Drain Mortar
Bedding thickness: 4 – 6 cm



Movement joint

vdw 885 plus FugenFlex
at least along adjoining structures and every 6 m maximum*



Unbound base course

Thickness approx. 21–24 cm
depending on the frost protection zone

* for more information on calculating and laying out movement joints see the GftK movement joint planning aid at www.gftk-info.de/planung

Product information

vdw 470 – Landscaping Drain Mortar



Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. **Detailed application instructions on page 26.**

for light to medium traffic loads · permeable to water · ready to use · early pedestrian access and loading · WET & DRY wet and dry application

vdw 480 – Bedding Compound



High-grade, polymer-modified bedding compound containing trass for the simple production of free-draining bedding mortar for laying paving and slabs. **Detailed application notes on page 29.**

for light to mediumtraffic loads · early pedestrian access and loading · permeable to water

vdw 495 – Universal Adhesive Slurry



Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. **Ideally suited for setting and bonding garden wall blocks. Detailed application notes on page 37.**

for light to heavy traffic loads · ready to use · early pedestrian access and loading

vdw 815 ultra – 2K Slab Joint Mortar



The slab jointing mortar for the narrow joint. Highly free flowing, self-compacting and workable even at low temperatures and in the rain. Virtually no binder film. **Particularly durable! Detailed application notes on page 62.**

NEW from 2026

for light traffic loads · > 4 mm joint width ≥ 4 mm · ab 2 cm especially for thin-layer paving · Can be used from 3 °C to 25 °C

permeable to water · Rainproof, no covering required · clean surface · pro product · high-pressure cleaners

vdw 840 plus – 1K Jointing Mortar



The pourable jointing mortar for pedestrian areas. Ready mixed and ready to use. Just open the pail, cut open the PE liner, spread part quantities over the surface, slurry in with water, sweep off – done! **Especially for factory-impregnated or sealed surfaces. Detailed application notes on page 70.**

for pedestrian areas · >3 mm joint width ≥ 3 mm · long working time · DIY particularly easy application

permeable to water · clean surface · especially for coated concrete block

vdw 885 plus – FugenFlex



Highly elastic 1-component joint sealant for forming movement joints. Also suitable as a paving joint for slabs laid unbound (loose or on pedestals). **Detailed application notes on page 96.**

highly elastic · ≥ 4 mm joint width ≥ 4 ≤ 20 mm · also for vertical joints · matt and textured colour · suitable for surface jointing · suitable for pedestals

vdw 950 – StoneProtect plus 3 in 1



Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound jointing mortars. **Detailed application notes on page 100.**

System build-up for slab paving

with water-impermeable jointing

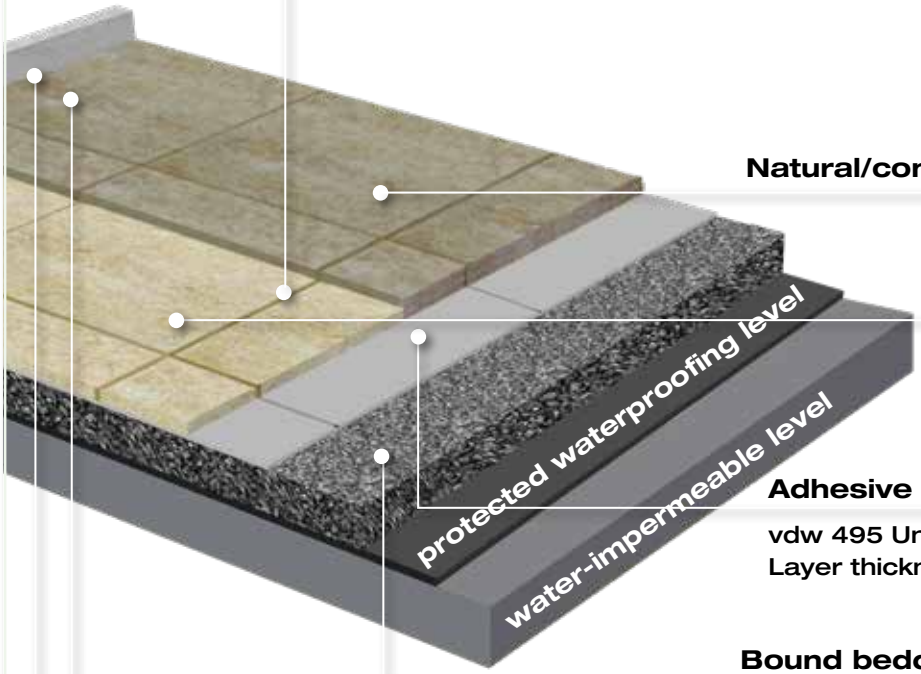
This build-up note is intended as a guide for the rigid laying and jointing of ceramic terrace elements at least 2 cm thick, or natural stone or concrete slabs at least 3 cm thick, with vdw mortar systems.



Recommended build-up for water-impermeable jointing

Bound joint

vdw 415 Cement Based Jointing Mortar Color



Natural/concrete stone

Ceramic terrace elements

Adhesive slurry

vdw 495 Universal Adhesive Slurry
Layer thickness: 2–5 mm

Bound bedding

vdw 480 Bedding Compound
mix ratio 1:6–1:8, chippings 2/5 or 5/8
Bedding thickness: 4 – 6 cm
alternative:
vdw 470 Landscaping Drain Mortar
Bedding thickness: 4 – 6 cm

vdw 950 StoneProtect plus 3 in 1
for absorbent stone

Movement joint

vdw 885 plus FugenFlex
at least along adjoining structures and every 6 m maximum*

* for more information on calculating and laying out movement joints see the GftK movement joint planning aid at www.gftk-info.de/planung

Product information

vdw 470 – Landscaping Drain Mortar



Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. **Detailed application instructions on page 26.**

for light to medium traffic loads

permeable to water

ready to use

early pedestrian access and loading

WET & DRY

wet and dry application

vdw 480 – Bedding Compound



High-grade, polymer-modified bedding compound containing trass for the simple production of free-draining bedding mortar for laying paving and slabs. **Detailed application notes on page 29.**

for light to mediumtraffic loads

early pedestrian access and loading

permeable to water

vdw 495 – Universal Adhesive Slurry



Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. **Ideally suited for setting and bonding garden wall blocks. Detailed application notes on page 37.**

for light to heavy traffic loads

ready to use

early pedestrian access and loading

vdw 415 – Cement Based Jointing Mortar Color

NEW from 2026



Cement-based, rapid-hardening, early-loadable flexible jointing mortar for the easy jointing of ceramic, concrete and reconstituted stone slabs. **Detailed application notes on page 50.**

for pedestrian traffic

≥ 2 mm

joint width ≥ 2 mm ≤ 20 mm

early pedestrian access and loading

water-impermeable

vdw 885 plus – FugenFlex



Highly elastic one-component joint sealant with excellent resistance to weathering and ageing, for light to medium loads. **Detailed application notes on page 96.**

highly elastic

≥ 4 mm

joint width ≥ 4 mm ≤ 20 mm

also for vertical joints

matt and textured colour

suitable for full-surface jointing

suitable for pedestals

vdw 950 – StoneProtect plus 3 in 1



Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound jointing mortars. **Detailed application notes on page 100.**

System build-up for paving setts

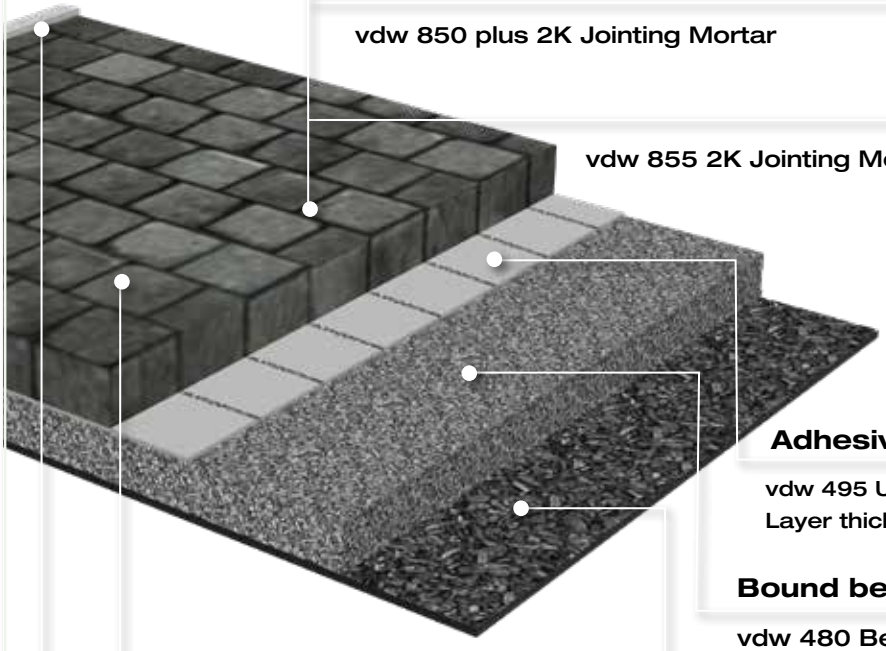
with water-permeable jointing



This build-up note is intended as guidance for the **firm** laying and jointing of paving setts with vdw mortar systems.



Firm laying (example)



Bound joint

vdw 800 2K Paving Joint Mortar



alternative

vdw 830 2K Paving Joint Mortar Color



vdw 850 plus 2K Jointing Mortar



vdw 855 2K Jointing Mortar



Adhesive slurry

vdw 495 Universal Adhesive Slurry
Layer thickness: 2–5 mm



Bound bedding

vdw 480 Bedding Compound
mix ratio 1:6, chippings 2/5 or 5/8
Bedding thickness: 4 – 6 cm
alternative:
vdw 470 Gala Drain Mortar
Bedding thickness: 4 – 6 cm



Paving

Movement joint

vdw 885 plus FugenFlex
At least along adjoining structures and every 6 m maximum*



Unbound base course

Thickness approx. 21–24 cm
depending on the frost protection zone

* for more information on calculating and laying out movement joints see the GftK movement joint planning aid at www.gftk-info.de/planung

vdw 800 – 2K Paving Joint Mortar



The well-known classic among paving joint systems, with a broad range of uses on paving and clinker surfaces. **Detailed application notes on page 54.**

for light traffic loads · permeable to water · joint width ≥ 5 mm

vdw 830 – 2K Paving Joint Mortar Color



The coloured jointing mortar for designing natural stone paving, concrete blocks, slabs and clinker surfaces on terraces, paths, passageways and garage driveways. **Detailed application notes on page 66.**

for light traffic loads · permeable to water · joint width ≥ 5 mm

vdw 850 plus – 2K Jointing Mortar, self-compacting



The top all-rounder among paving joint mortars: it can be applied even at low temperatures and in the rain, and worked with a water spray jet. Virtually no binder film. Excellently suited to trafficked areas. **Detailed application notes on page 74.**

for light to medium traffic loads · joint width ≥ 5 mm · permeable to water · clean surface · no covering · for particularly wide joints · Can be used from 3 °C to 25 °C · suitable for high-pressure cleaners · pro product

vdw 855 – 2K Jointing Mortar, highly compacting



The paving joint mortar for heavily trafficked areas: e.g. loading bays, roads and intersections, and channels. **Detailed application notes on page 78.**

for light to heavy traffic loads · joint width ≥ 8 mm · no covering · permeable to water · clean surface

vdw 885 plus – FugenFlex



Highly elastic one-component joint sealant with excellent resistance to weathering and ageing, for light to medium loads. **Detailed application notes on page 96.**

highly elastic · joint width ≥ 4 ≤ 20 mm · also for vertical joints · matt and textured colour · suitable for full-surface jointing · suitable for pedestals

vdw 950 – StoneProtect plus 3 in 1



Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound jointing mortars. **Detailed application notes on page 100.**

System build-up for paving setts

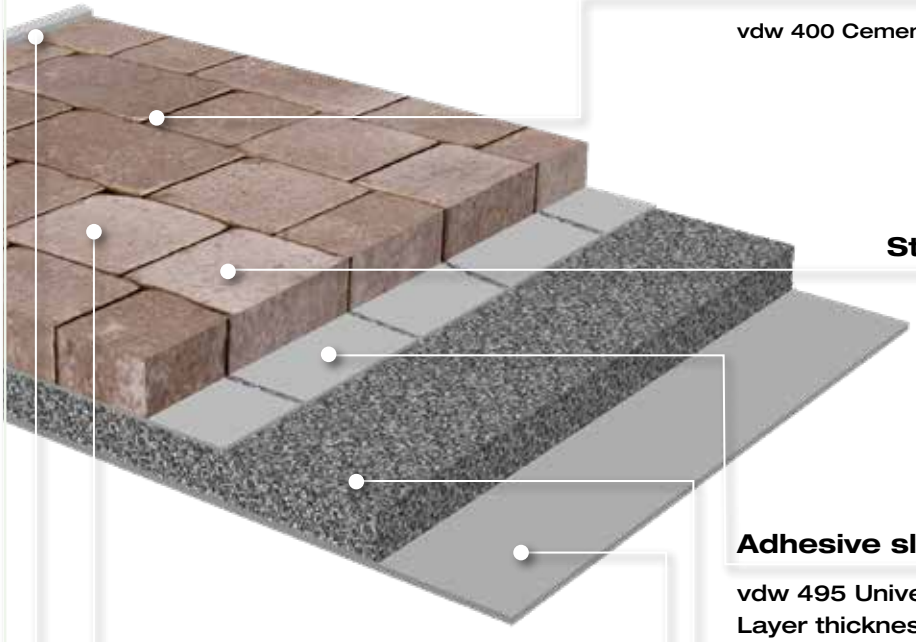
with water-impermeable jointing



This build-up note is intended as guidance for the **firm** laying and jointing of paving setts with vdw mortar systems.



Recommended build-up for water-impermeable jointing



Bound joint

vdw 400 Cement Based Jointing Mortar



Stone paving

Adhesive slurry

vdw 495 Universal Adhesive Slurry
Layer thickness: 2–5 mm



MPA-tested

Stone protection

vdw 950 StoneProtect plus 3 in 1
for absorbent stone



Bound bedding

vdw 480 Bedding Compound
mix ratio 1:6–1:8, chippings 2/5 or 5/8
Bedding thickness: 4 – 6 cm
(for pedestrian loads)
alternative:
vdw 470 Landscaping Drain Mortar
Bedding thickness: 4 – 6 cm



Movement joint

vdw 885 plus FugenFlex
at least along adjoining
structures and every
6 m maximum*



Unbound base course

Thickness approx. 21–24 cm
depending on the frost protection zone

* for more information on calculating and laying out movement joints see the GftK movement joint planning aid at www.gftk-info.de/planung

Product information

vdw 470 – Landscaping Drain Mortar



Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. **Detailed application instructions on page 26.**

for light to medium traffic loads

permeable to water

ready to use

early pedestrian access and loading

WET & DRY wet and dry application

vdw 480 – Bedding Compound



High-quality, polymer-modified bedding compound containing trass for the easy production of free-draining bedding mortar for laying paving and slabs. **Detailed application instructions on page 29.**

for light to medium traffic loads

early pedestrian access and loading

permeable to water

vdw 495 – Universal Adhesive Slurry



Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. **Ideally suited for setting and bonding garden wall blocks. Detailed application notes on page 37.**

for light to heavy traffic loads

ready to use

impermeable to water

early pedestrian access and loading

vdw 400 – Cement Based Jointing Mortar



Cement-based, polymer-modified, rapid-hardening jointing mortar for jointing surfaces subject to car and lorry traffic, indoors and outdoors. Easy to apply without pre- or post-treatment agents. **Detailed application notes on page 46.**

NEW formula from 2026

for light to heavy traffic loads

≥ 5 mm joint width ≥ 5 mm ≤ 50 mm

impermeable to water

EXTRA for particularly wide joints

vdw 885 plus – FugenFlex



Highly elastic one-component joint sealant with excellent resistance to weathering and ageing, for light to medium loads. **Detailed application notes on page 96.**

highly elastic

≥ 4 mm joint width ≥ 4 mm ≤ 20 mm

also for vertical joints

matt and textured colour

suitable for full-surface jointing

suitable for pedestals

vdw 950 – StoneProtect plus 3 in 1



Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound jointing mortars. **Detailed application notes on page 100.**

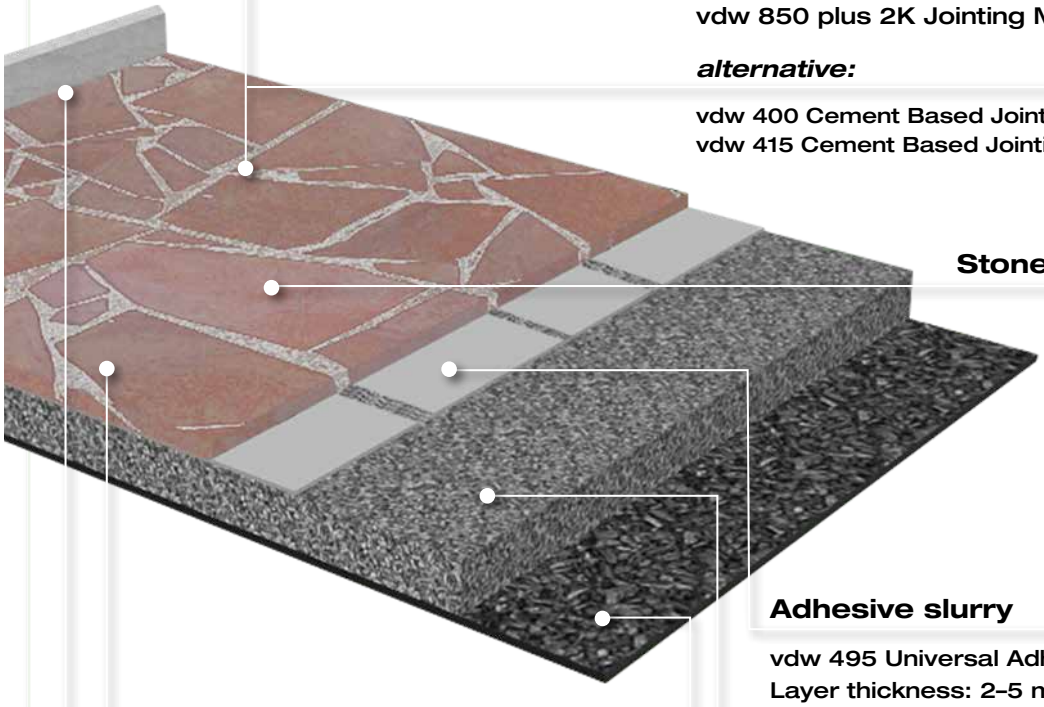
GftK system build-up

Polygonal and natural stone slabs with wide joints

This build-up note is intended as guidance for the **firm** laying and jointing of polygonal and natural stone slabs with wide joints, using the vdw mortar systems, in bound construction.



Firm laying (example)



Bound joint

vdw 850 plus 2K Jointing Mortar



alternative:

vdw 400 Cement Based Jointing Mortar or
vdw 415 Cement Based Jointing Mortar Color



Stone paving

Adhesive slurry

vdw 495 Universal Adhesive Slurry
Layer thickness: 2–5 mm



Stone protection

vdw 950 StoneProtect plus 3 in 1
for absorbent stone



Bound bedding

vdw 480 Bedding Compound
mix ratio 1:6–1:8, chippings 2/5 or 5/8
Bedding thickness: 4 – 6 cm
alternative:
vdw 470 Landscaping Drain Mortar
Bedding thickness: 4 – 6 cm



Movement joint

vdw 885 plus FugenFlex
at least along adjoining
structures and every
6 m maximum*



Unbound base course

Thickness approx. 21–24 cm
depending on the frost protection zone

* for more information on calculating and laying out movement joints see the GftK movement joint planning aid at www.gftk-info.de/planung

Product information

vdw 470 – Landscaping Drain Mortar



Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. **Detailed application instructions on page 26.**

for light to medium traffic loads · permeable to water · ready to use · early pedestrian access and loading · WET & DRY wet and dry application

vdw 480 – Bedding Compound



High-grade, polymer-modified bedding compound containing trass for the simple production of free-draining bedding mortar for laying paving and slabs. **Detailed application notes on page 29.**

for light to mediumtraffic loads · early pedestrian access and loading · permeable to water

vdw 495 – Universal Adhesive Slurry



Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. **Ideally suited for setting and bonding garden wall blocks. Detailed application notes on page 37.**

for light to heavy traffic loads · ready to use · early pedestrian access and loading

vdw 400 – Cement Based Jointing Mortar



Cement-based, polymer-modified, rapid-hardening jointing mortar for jointing surfaces subject to car and lorry traffic, indoors and outdoors. Easy to apply without pre- or post-treatment agents. **Detailed application notes on page 46.**

NEW formula from 2026

for light to heavy traffic loads · ≥ 5 mm joint width ≥ 5 ≤ 50 mm · impermeable to water · EXTRA for particularly wide joints

vdw 850 plus – 2K Jointing Mortar, self-compacting



The top all-rounder among paving joint mortars: it can be applied even at low temperatures and in the rain, and worked with a water spray jet. Virtually no binder film. Excellently suited to trafficked areas. **Detailed application notes on page 74.**

for light to medium traffic loads · ≥ 5 mm joint width ≥ 5 mm · permeable to water · clean surface · no covering · EXTRA for particularly wide joints · Can be used from 3 °C to 25 °C · suitable for high-pressure cleaners · pro product

vdw 885 plus – FugenFlex



Highly elastic one-component joint sealant with excellent resistance to weathering and ageing, for light to medium loads. **Detailed application notes on page 96.**

highly elastic · ≥ 4 mm joint width ≥ 4 ≤ 20 mm · also for vertical joints · matt and textured colour · suitable for full-surface jointing · suitable for pedestals

vdw 950 – StoneProtect plus 3 in 1



Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound jointing mortars. **Detailed application notes on page 100.**

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vdw Mortar Systems
for the bound bedding



1. Bound joint
2. Adhesive slurry
3. Bound mortar bedding
4. Unbound base course

Product information

vdw 470 – Landscaping Drain Mortar



Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors.
Detailed application instructions on page 26.

for light to medium traffic loads · permeable to water · ready to use · early pedestrian access and loading · WET & DRY wet and dry application

vdw 480 – Bedding Compound



High-quality, polymer-modified bedding compound containing trass for the easy production of free-draining bedding mortar for laying paving and slabs.
Detailed application instructions on page 29.

for light to medium traffic loads · early pedestrian access and loading · permeable to water

vdw 490 – Universal Trass Drain Mortar



The highly free-draining, trass-cement-bound bedding mortar for natural stone and reconstituted stone paving, where the water permeability of the whole surface is the priority.
Detailed application instructions on page 33.

for light to heavy traffic loads · permeable to water · ready to use · early pedestrian access and loading

MPA-tested

vdw 495 – Universal Adhesive Slurry



Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. Ideally suited for setting and bonding garden wall blocks.
Detailed application instructions on page 37.

for light to heavy traffic loads · ready to use · early pedestrian access and loading

vdw 890N – 2K Bedding Mortar



2K epoxy resin bedding material for natural stone setts, slabs and clinker paving on trafficked areas. Ideally suited to bedding build-ups with low construction heights!
Detailed application instructions on page 41.

for light to heavy traffic loads · permeable to water · ready to use · min. 3 cm specially for low build-up heights

vdw 470 – Landscaping Drain Mortar

Bedding mortar for natural stone and concrete block paving and slabs.


for light to medium traffic loads


permeable to water


ready to use



wet and dry application


early pedestrian access and loading

wet & dry application



Further properties

• pleasant consistency and no tearing when spreading	➡ easier working, hardly any build-up on the screeding tool and therefore faster progress on site
• high strengths	➡ suitable for traffic loads up to N3 to ZTV-Wegebau i.e. the category trafficable, vehicles over 3.5 t to DIN 18318
• highly water-permeable	➡ meets the requirements of DIN 18318 and of ZTV-Wegebau
• rapid hardening	➡ early access on foot and jointing
• optimised formula	➡ can be mixed or applied dry, unmixed
• capillary-passive effect thanks to high-grade polymer modification	➡ prevents rising capillary moisture despite fine chipping gradings

Technical Data

Product description

Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. Its special grading curve produces a highly water-permeable mortar bed with virtually no capillary suction. This reliably prevents frost damage.

Binder:	Standard cements with additives, low in chromate to TRGS 613
Bedding thickness:	4 –10 cm
Packaging:	25 kg bag

Material data*

Compressive strength:	> 30.0 N/mm² after 28 days
Adhesive tensile strength:	> 0.8 N/mm²
Water permeability:	> 1000 L/m²/h
Storage life:	12 months, stored dry and frost-free

Application data

Mixing ratio:	1.8 – 2.0 litres of water per 25 kg bag
Pot life:	approx. 90 minutes at 20 °C after mixing
Outside temperature:	min. 5 °C, max. 25 °C
Substrate temperature:	min. 5 °C, max. 25 °C

Ecology

Water hazard class:	Class 1 – slightly hazardous to water
Disposal:	Disposal code 170101, 101314

*) determined by standard-compliant testing

Application notes

On constructions over drainage mats with open paving edges (e.g. balconies and roof terraces) the bedding mortar must be completely dry before jointing, as otherwise leaching from the bedding layer can cause efflorescence at open paving edges or at drainage fittings.

Sufficient drying through is only ensured after at least 3 days.

Consumption
Bedding thickness: 4 – 10 cm
Build-up height: approx. 17 kg/m²/cm

Further properties



vdw 470 can be mixed with added water in a free-fall mixer, or ...



... for purely pedestrian use it can be spread dry over the area and wetted with water. Further information is given in the technical data sheet.

Application

You will find further information in this application video



prepare the sub-base and base courses



pour in max. 2 l of water



add vdw 470



apply the mortar and screed it off over guide rails



set the paving with a hammer



for slabs apply adhesive slurry to the underside



follow the curing notes!

Requirements:
The sub-base and base course must be sufficiently level, load-bearing and free-draining. They must be dimensioned so that no harmful deformation occurs. Ensure drainage by means of a free-draining substrate or a sufficient drainage fall, if necessary combined with a drainage mat. Ambient and substrate temperature > 5 °C, max. 25 °C.

Mixing the trass drain mortar:
Mix **vdw 470 Landscaping Drain Mortar** with 8 % (2.0 litres of water per 25 kg of dry mortar) of clean, cold water to a homogeneous, earth-moist consistency. No maturing time required. Stiffened mortar must not be made workable again, either with water or with fresh mortar.

Applying the mortar:
Apply the mixed mortar in the usual way. Lay out only as much material as can be worked within the pot life. In the compacted state the layer thickness must be at least 4 cm and at most 10 cm, depending on the area of use and the construction method. Set the paving firmly into **vdw 470 Landscaping Drain Mortar** with a hammer. To improve adhesion we recommend dipping the paving blocks into **vdw 495 Universal Adhesive Slurry** before jointing. After 24 hours the areas can be jointed with **vdw Paving Jointing Mortar**. When laying slabs, screed **vdw 470 Landscaping Drain Mortar** level, observing the respective bedding thickness. Before laying the slabs, apply **vdw 495 Universal Adhesive Slurry** to the underside of the slab. The joint area must be free of **vdw 495 Universal Adhesive Slurry**.

Alternative application (for pedestrian areas only)
The mortar is poured straight from the bag, applied at the appropriate layer thickness and screeded off level. Then activate the laid-out area with a fine water spray. To improve adhesion we recommend dipping the setts in **vdw 495 Universal Adhesive Slurry** before laying. Before laying slabs, apply **vdw 495 Universal Adhesive Slurry** to the underside of the slab. The joint area must be free of **vdw 495 Universal Adhesive Slurry**. Once the paved area is finished, wet it thoroughly with water. The water then passes through the joints into the bedding layer and activates the hardening.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly laid areas for a period of at least 48 hours. After 24 hours the areas can be jointed. Protect the mortar from rapid drying out and from rain for 12 hours. Trafficable by cars after 7 days. Fully loadable after 14 days.

vdw 480 – Bedding Compound

High-quality, polymer-modified bedding compound containing trass for the easy production of free-draining base layers or free-draining bedding mortar for laying paving and slabs outdoors.



for light to medium traffic loads



permeable to water



early pedestrian access and loading

Further properties

- high strength ➡ up to 30 N/mm² possible
- high yield ➡ mixing ratio of 1:6 possible and suitable for load classes N1–N3 of the ZTV-Wegebau
- rapid hardening ➡ walkable early, can be jointed 24 h after installation
- optimised formula ➡ rapid hardening and therefore less tendency to efflorescence
- capillary-passive effect ➡ prevents rising capillary moisture with fine chipping gradings

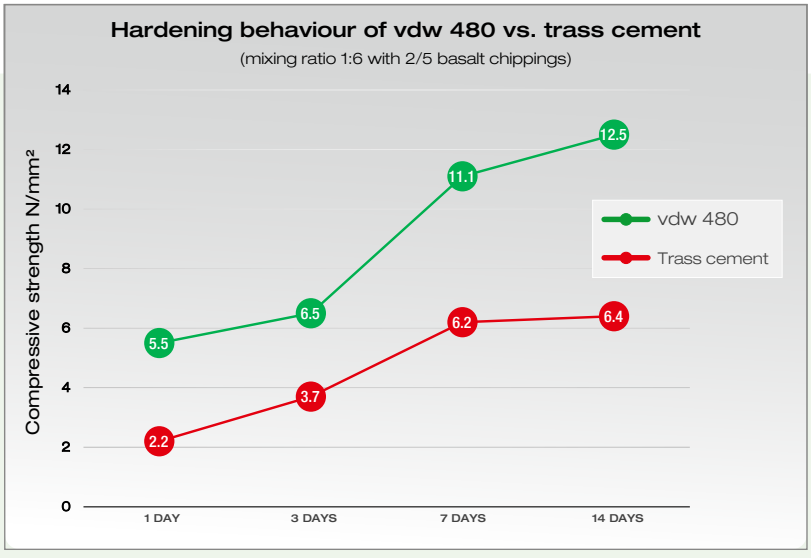
Product advantages over ordinary trass cement:

Discover the advantages of vdw 480 Bedding Compound!





- pleasant consistency and no tearing when spreading
  ➡ easier working, hardly any build-up on the screeding tool and therefore rapid progress on site
- high strength
  ➡ up to 30 N/mm² possible
- very high yield
  ➡ At a mixing ratio of 1:6 for load class N3 or 1:8 for load class N1 of the ZTV-Wegebau
- rapid hardening
  ➡ walkable early, can be jointed 24 h after installation
- optimised formula
  ➡ no efflorescence despite the rapid hardening
- capillary-passive effect through high-grade polymer modification
  ➡ prevents rising capillary moisture with fine chipping gradings



Build safely in the system!

Technical Data

Product description
vdw 480 Bedding Compound is a special binder for producing free-draining bedding mortars.

Composition:	Cement to EN 197, trass to DIN 51043 and special additives
Packaging:	25 kg bag

Material data
If the mixing ratio of 1:4 with quartz sand 2/4 and **vdw 480 Bedding Compound** is observed, together with an added water content of 6 % of the total mortar quantity (7.5 litres for 125 kg), the following material data are achieved.

Flexural strength:	approx. 7.0 N/mm²
Compressive strength:	approx. 30.0 N/mm²
Water permeability:	highly water-permeable
Storage life:	1 year, dry and frost-free in the sealed original packaging

Application data

Pot life:	90 minutes at 20 °C object and ambient temperature
Outside temperature:	min. + 5 °C to max. 25 °C
Substrate temperature:	min. + 5 °C to max. 25 °C

Ecology

Water hazard class:	Class 1 – slightly hazardous to water
Disposal:	Waste code 170101, 101314

Consumption:	approx. 2.4 kg vdw 480 (mixing ratio 1:6) per cm of layer thickness / per 1 m² approx. 1.8 kg vdw 480 (mixing ratio 1:8) per cm of layer thickness / per 1 m²
Yield:	25 kg vdw 480 yield up to 175 kg of bedding mortar at a mixing ratio of 1:6 25 kg vdw 480 yield up to 235 kg of bedding mortar at a mixing ratio of 1:8

Bedding mortar requirements for the finished work

		Compressive strength in N/mm² or MPa		
Use category / load class		ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 5.0*	≥ 4.0	≥ 17.0
N2	trafficable, vehicles up to 3.5 t	≥ 10.0*	≥ 10.0	
N3	trafficable, vehicles over 3.5 t	≥ 15.0*	≥ 15.0	

* Bedding type 1
Info: bedding type 2 (> 4 N/mm² N1 – N3)

Application

You will find further information in this application video



Suitable aggregate ...



... and premix the corresponding quantity of vdw 480



Add max. 6 % water



apply the mortar and screed it off over guide rails



set the paving with a hammer



For slabs, apply vdw 495 Universal Adhesive Slurry to the underside



follow the curing notes!

Product properties:

vdw 480 Bedding Compound serves as a special binder for producing free-draining bedding mortars. The compound has been tailored specifically to the needs of the applicator. Unlike ordinary trass cement, this system consists of several special binders and additives. Thanks to the use of various premium cements, beddings produced with **vdw 480 Bedding Compound** reach a very early initial strength. Together with **vdw 495 Universal Adhesive Slurry** this creates a system that can be overworked with jointing mortar after only 24 h. A special composition of the compound allows a higher mixing ratio, which gives an economic advantage as well as a consistently high strength of the bedding. The “encapsulation” of the aggregate to be bound with the special binder prevents capillary suction in the bedding. Rising moisture in the bedding can therefore be avoided above all with fine grading curves (e.g. 2-5 mm).

Requirements:

Sub-base and base layer must be sufficiently level, load-bearing and able to drain water away. They must be dimensioned so that no harmful deformation occurs. Drainage must be ensured by a free-draining substrate or by a sufficient drainage fall, if necessary in combination with a drainage mat, min. 2.5 %. Ambient and substrate temperature > 5 °C, max. 25 °C. Application should take place in dry weather.

Recommended mineral aggregates:

E.g. basalt chippings or quartz sand grades 2/4 mm, 2/5 mm, 2/8 mm or 5/8 mm for **vdw 480 Bedding Compound**.

Mixing the bedding compound:

Following the specified mixing ratio, place the mineral aggregates in a forced-action mixer or free-fall mixer and add **vdw 480 Bedding Compound**. Allow to premix thoroughly. Then add water until an earth-moist mix is obtained, max. 6 % of the total mortar quantity. **Please allow for the inherent moisture of the aggregate used.**

Installation:
Apply the mixed bedding mortar by hand in a layer thickness that gives a compacted thickness of min. 4 cm to max. 10 cm. With dimensionally accurate paving or slabs (concrete block, calibrated material) the bedding mortar can be set to the required layer thickness using screed rails. Bed the paving firmly into the bedding mortar with a hammer. To improve adhesion we recommend dipping the setts in **vdw 495 Universal Adhesive Slurry** before jointing. When laying slabs, apply **vdw 495 Universal Adhesive Slurry** to the underside of the slab. The joint area must be permeable to water and therefore also free of **vdw 495 Universal Adhesive Slurry**.

Loading and jointing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Areas produced with **vdw 480 Bedding Compound** can be walked on and jointed with **vdw paving or slab jointing mortar** after 24 hours at the earliest, or once the mortar has hardened. Full loading after 7 days.

Curing:
The installed bedding mortar must be protected against drying out too quickly; strong heat and draughts are to be avoided. Immediately after installation the bedding mortar must be protected against drying out for a sufficient period, but for at least 24 hours.

Application notes

In constructions on drainage mats with open paving edges (e.g. balconies & roof terraces) the bedding mortar must be completely dry before jointing, as otherwise leaching from the bedding layer can cause efflorescence on the edge profile.

Sufficient drying through is only ensured after at least 3 days.

Mixing ratio / Compressive strengths

Compressive strengths	Mixing ratio vdw 480 Bedding Compound to			
	Quartz sand 2/4	Chippings 2/5	Chippings 2/8	Chippings 5/8
> 10 N/mm²	1:6	1:6	1:6	1:5
	Consumption vdw 480 approx. 2.4 - 2.8 kg/m²/cm layer thickness *			
> 20 N/mm²	1:5	1:5	1:5	1:4
	Consumption vdw 480 approx. 2.8 - 3.4 kg/m²/cm layer thickness *			
> 30 N/mm²	1:4	–	–	–
	Consumption vdw 480 approx. 3.4 kg/m²/cm layer thickness *			

* The consumption figures given are calculated with a bulk density of the ready-mixed mortar of 1.7 kg/l, which corresponds to a consumption of 17 kg/m²/cm layer thickness. Please allow for the density of the aggregate actually used.

vdw 490 – Universal Trass Drain Mortar

Bedding mortar for natural stone and concrete block paving and slabs.


for light to heavy traffic loads


permeable to water


ready to use


early pedestrian access and loading

Further properties

- pleasant consistency and no tearing when spreading → easier working, hardly any build-up on the screeding tool and therefore rapid progress on site
- high strength → up to 35 N/mm² achievable
- highly water-permeable → meets the requirements of DIN 18318 and of ZTV-Wegebau
- rapid hardening → walkable early, can be jointed 24 h after installation
- optimised formula → homogeneous mixing ratio & no segregation
- capillary-passive effect thanks to high-grade polymer modification → prevents rising capillary moisture with fine chipping gradings

Technical Data

Product description
Trass-cement-bound factory dry mortar for laying paving setts and slabs outdoors. Its special grading curve produces a highly water-permeable mortar bed with virtually no capillary suction. This reliably prevents frost damage.

Binder:	Standard cements with additives, low in chromate to TRGS 613
Bedding thickness:	4 –10 cm
Packaging:	25 kg bag

Material data*

Compressive strength:	> 35.0 N/mm² after 28 days
Adhesive tensile strength:	> 1.6 N/mm²
Water permeability:	> 1000 L/m²/h
Storage life:	12 months, stored dry and frost-free

Application data

Mixing ratio:	1.8 – 2.0 litres of water per 25 kg bag
Pot life:	approx. 2 hours at 20 °C after mixing
Outside temperature:	min. 5 °C, max. 25 °C
Substrate temperature:	min. 5 °C, max. 25 °C

Ecology

Water hazard class:	Class 1 – slightly hazardous to water
Disposal:	Disposal code 170101, 101314

Consumption: approx. 17 kg/m²/cm of build-up height

*) determined by standard-compliant testing

Application notes

On constructions over drainage mats with open paving edges (e.g. balconies and roof terraces) the bedding mortar must be completely dry before jointing, as otherwise leaching from the bedding layer can cause efflorescence at open paving edges or at drainage fittings.

Sufficient drying through is only ensured after at least 3 days.

Product requirements bedding mortar

		Compressive strength in N/mm² or MPa		
Use category / load class		**ZTV Wegebau**	**DIN 18318**	**FGSV M FP geb**
N1	**walkable**	**≥ 10.0 ***	**≥ 10.0**	**≥ 30.0 mean value ≥ 25.0 single value**
N2	**trafficable, vehicles up to 3.5 t**	**≥ 20.0 ***	**≥ 20.0**	
N3	**trafficable, vehicles over 3.5 t**	**≥ 30.0 ***	**≥ 30.0**	

* Bedding type 1
Info: bedding type 2 (> 10 N/mm² N1 – N3)

Application

You will find further information in this application video



prepare the sub-base and base courses



Pour in max. 2 l of water



Add vdw 490



apply the mortar and screed it off over guide rails



set the paving with a hammer



For slabs, apply vdw 495 Universal Adhesive Slurry to the underside



follow the curing notes!

Requirements:
The sub-base and base course must be sufficiently level, load-bearing and free-draining. They must be dimensioned so that no harmful deformation occurs. Ensure drainage by means of a free-draining substrate or a sufficient drainage fall, if necessary combined with a drainage mat. Ambient and substrate temperature > 5 °C, max. 25 °C.

Mixing the Universal Trass Drain Mortar:
Mix **vdw 490 Universal Trass Drain Mortar** homogeneously with 8 % clean, cold water (2.0 litres of water per 25 kg of dry mortar) to an earth-moist consistency. No maturing time is required. Stiffened mortar must not be made workable again either with water or with fresh mortar.

Applying the mortar:
The mixed mortar is applied in the usual way. Lay out only as much material as can be worked within the pot life. The layer thickness in the compacted state must be at least 4 cm and no more than 10 cm, depending on the area of use and the construction method. Bed the setts hammer-tight in **vdw 490 Universal Trass Drain Mortar**. To improve adhesion we recommend dipping the setts in **vdw 495 Universal Adhesive Slurry** before laying. After 24 hours the areas can be jointed with **vdw Paving Joint Mortar**. When laying slabs, screed **vdw 490 Universal Trass Drain Mortar** off level, observing the respective bedding thickness. Before laying the slabs, apply **vdw 495 Universal Adhesive Slurry** to the underside of the slab. The joint area must be free of **vdw 495 Universal Adhesive Slurry**.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the setting time). Cordon off the freshly laid areas for a period of at least 48 hours. After 24 hours the areas can be jointed. Protect the mortar from rapid drying out and from rain for 12 hours. Can take car traffic after 7 days. Fully loadable after 14 days.

vdw 495 – Universal Adhesive Slurry

Adhesive mortar for improving the bond of paving and slab surfaces, indoors and outdoors. Ideally suited for setting and bonding garden wall blocks



for light to heavy traffic loads



ready to use



early pedestrian access and loading

- cement grey



brushable & trowelable



Further properties

- variable consistency ➡ can be brushed on or applied with a trowel
- can be portioned ➡ mix only the quantity actually needed
- high bond strength ➡ optimum bond between bedding and paving
- moisture-inhibiting ➡ prevents rising damp in natural stone
- rapid hardening ➡ early loading, ready for jointing 24 h after application
- universally usable ➡ adhesive mortar for setts, slabs and garden wall blocks

Technical Data

Product description

vdw 495 Universal Adhesive Slurry is a high-quality, highly polymer-modified, hydraulically setting bonding agent for laying setts and non-translucent slab coverings such as stoneware, split tiles and natural stone on a suitable free-draining bedding mortar.

Binder:	Standard cements with additives, low in chromate to TRGS 613
Packaging:	25 kg bag

Material data

Adhesive tensile strength:	> 2.0 N/mm²
Storage life:	12 months, stored dry and frost-free

Application data

Mixing ratio:	We recommend mixing part quantities, 5 or 7 l of water per 25 kg bag, depending on the application method
Pot life:	approx. 60 minutes at 20 °C after mixing
Maturing time:	approx. 2 minutes
Underfloor heating:	suitable
Outside temperature:	min. 5 °C, max. 25 °C
Substrate temperature:	min. 5 °C, max. 25 °C

Ecology

Water hazard class:	Class 1 – slightly hazardous to water
Disposal:	Disposal code 170101, 101314

Consumption: approx. 1.6 kg/m²/mm of layer thickness

Product requirements for adhesive slurry

		Bond strength in N/mm² or MPa		
Use category / load class		ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 0.4	≥ 0.4	≥ 1.5 mean value ≥ 1.2 single value
N2	trafficable, vehicles up to 3.5 t	≥ 0.8	≥ 0.8	
N3	trafficable, vehicles over 3.5 t	≥ 0.8	≥ 1.0	

Application

You will find further information in this application video



Prepare sub-base, base courses and bedding. Then pour in 5 or 7 l of water



add vdw 495 and stir to a homogeneous mix



Dipping ...



... brushing on ...



or apply with a notched trowel.



laying “wet on wet”



follow the curing notes!

Product properties:
vdw 495 Universal Adhesive Slurry is suitable for both paving and slab coverings of every kind. Its adjustable consistency allows **vdw 495 Universal Adhesive Slurry** to be used by trowel, brush or dipping. The material can be portioned to requirements without difficulty and mixed with different amounts of water without any loss of quality. Besides an optimum bond between the paving material and the bedding, it protects sensitive natural stone (e.g. granite or sandstone) against rising damp. **vdw 495 Universal Adhesive Slurry** can be loaded early, so finished areas can be jointed as soon as 24 h after laying, in the system with **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar/vdw 490 Universal Trass Drain Mortar**.

Requirements:
The sub-base and base course must be sufficiently level, load-bearing and free-draining and must match the loads to be expected! They must be dimensioned so that no damaging deformation occurs. Ambient and substrate temperature > 5 °C, max. 25 °C.

Mixing the Adhesive Slurry:
To produce a brushable mortar for brushing on or dipping, mix **vdw 495 Universal Adhesive Slurry** with max. 7 litres of clean, cold water (for 25 kg of dry mortar) for approx. 2 minutes with a suitable stirrer until homogeneous. Maturing time approx. 2 minutes, then stir up again briefly. To produce a stiff mortar for application with a notched trowel, mix **vdw 495 Universal Adhesive Slurry** with max. 5 litres of clean, cold water (for 25 kg of dry mortar) for the mixing time stated above. Stiffened mortar must not be made workable again either with water or with fresh mortar. We recommend mixing part quantities that can be used up within the stated pot life.

Applying the mortar:
Apply the mixed Universal Adhesive Slurry with a brush, by dipping or with a notched trowel to the clean underside of the paving unit, over the full area and generously. On slabs we recommend combing **vdw 495 Universal Adhesive Slurry** over the whole underside with the notched trowel. This ensures a sufficient bond. The unit coated with Universal Adhesive Slurry should be laid into the still fresh bedding mortar (“wet on wet”). **vdw 495 Universal Adhesive Slurry** must be protected against rapid drying out. The drainage capacity of the bedding in the joint area must be maintained.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the setting time). Close off the freshly laid areas for a period of at least 24 hours. After 24 hours the areas can be jointed. Protect the mortar against rapid drying out and rain for 12 hours. Fully loadable after 7 days.

Product benefits of adhesive slurries:

Discover the advantages of
vdw 495 Universal Adhesive Slurry!

Example of laying setts with adhesive slurry:



Example of laying slabs with adhesive slurry:*



*On ceramic terrace elements the bonding agent must always be applied with a notched trowel.

Example of laying wall blocks with adhesive slurry:



vdw 890 N – 2K Bedding Mortar

Ready-batched bedding material for natural stone setts, slabs and clinker paving on trafficked areas.



for light to heavy traffic loads



permeable to water



ready to use



specially for low build-up heights

- natural



Further properties

- water permeable
- high frost resistance
- Compressive strength 35 N/mm²
- low in chromate to TRGS 613

Technical Data

Product description

Ready-made quartz sand mix and epoxy resin binder for producing a water-permeable bedding mortar for natural stone setts, slabs and clinker paving on trafficked areas.

Base:	2-component, solvent-free epoxy resin
Grain size of the aggregate mix:	0.3 – 2.5 mm
Layer thickness:	3 – 10 cm (depending on the stone format)
Consumption:	approx. 1.6 kg/m²/mm
Packaging:	25 kg + 2 kg binder components

Material data

Density:	1.6 g/cm³
Flexural strength:	8.5 N/mm²
Compressive strength:	35.0 N/mm²
Water permeability:	permeable to water
Storage life:	1 year

Application data

Mixing ratio:	25 : 2
Pot life:	20 min. at 20 °C
Outside temperature:	> 7 °C
Substrate temperature:	> 7 °C

Ecology

Water hazard class:	Component A: Class 2
	Component B: Class 2
Disposal code:	Component A: 080410, 080499
	Component B: 080409, 080413

Packaging

Colours:	natural
Packaging:	Paper sack 25 kg aggregate mix
	+ 2 kg binder/2 bottles (A+B)
Art. no.:	890 102 827

Further Notes

Substrate

The substrate must be dimensioned to suit the anticipated traffic loads.

- The specified levels, falls and evenness must be ensured.
- Existing contamination must be removed without residue.

Bedding

- In the compacted state the thickness of the laying mortar should be 3 to 10 cm.

Material preparation

- Add the resin and hardener of the **vdw 890 N** binder component completely to the **mineral material MIX II** and mix intensively. **No water may be added to the finished mix.**
- **Mixing time: 5 min. in a forced-action mixer, 5 min. in a mortar tub with a forced-action stirrer.**
- Unmixed components must not be used.
- The mortar must be applied swiftly, immediately after mixing is complete.

Application



put in the aggregate first



add the two binder components



Paving can be laid into the fresh bedding mortar using a bonding agent



follow the curing notes!

Requirements:
The substrate must be dimensioned to suit the anticipated traffic loads.
- The specified levels, falls and evenness must be ensured.
- Existing contamination must be removed without residue.

Tools:
Forced-action mixer, mortar tub, paving line, spirit level, smoothing trowel, screed rail.

Material preparation:
- Add the resin and hardener of the **vdw 890 N** binder component completely to the **mineral material MIX II** and mix intensively. **No water may be added to the finished mix.**
- **Mixing time: 5 min. in a forced-action mixer, 5 min. in a mortar tub with a forced-action stirrer.**
- Unmixed components must not be used.
- The mortar must be applied swiftly, immediately after mixing is complete.

Application:
- A minimum air and object temperature of + 7 °C is required for application.
- The substrate must be dry.
- Apply the bedding mortar by hand in a layer thickness that gives a compacted thickness of min. 3 cm to max. 10 cm.
- With dimensionally accurate paving or slabs (concrete block, calibrated material) the bedding mortar can be set to the required layer thickness using screed rails.
- Bed the paving firmly into the bedding mortar with a hammer.
- To improve adhesion we recommend dipping the setts in **vdw 495 Universal Adhesive Slurry** before jointing. When laying slabs, apply **vdw 495 Universal Adhesive Slurry** to the underside of the slab.
- The joint area must be permeable to water and therefore free of **vdw 495 Universal Adhesive Slurry**.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time).
- Cordon off the freshly laid areas and protect them from rain for a period of at least 12 hours. The areas can then be walked on.
- Final release of the areas to traffic after 7 days.
- In principle a strength test should be carried out before the areas are put into service.

vdw Jointing Mortar

for concrete, natural stone, ceramic and clinker paving



Write to us:
contact@gftk-info.de
We are glad to support you with your project!



GftK

Quality for Professionals

vdw 400 – Cement Based Jointing Mortar

New formula

Cement-based, polymer-modified, rapid-hardening jointing mortar for jointing natural stone and concrete paving, indoors and outdoors.



for light to heavy traffic loads



impermeable to water



joint width ≥ 5 mm ≤ 50 mm



for particularly wide joints

- grey



Further properties

- impermeable to water
- highly frost and de-icing salt resistant
- highly free flowing
- self-compacting
- mechanical sweeper resistant
- ideal for polygonal slabs
- suitable for high-pressure cleaners
- early pedestrian access and loading
- for high traffic loads
- environmentally friendly
- can be mixed in part quantities

Technical Data

Product description
Cement-based, polymer-modified, rapid-hardening, waterproof jointing mortar with graded mineral aggregates.

Binder:	selected special cements, low in chromate to TRGS 613
Joint width:	continuously at least 5 mm*; for joint widths ≥ 15 mm the jointing depth must be at least twice the joint width
Joint depth:	fill the continuously open, non pre-filled joint
Packaging:	25 kg bag

Material data

Compressive strength:	after 24 hours	approx. 15 MPa
	after 7 days	approx. 25 MPa
	after 28 days	approx. 40 MPa
Water permeability:	impermeable to water	
Storage life:	9 months, stored dry and frost-free	

Application data

Added water:	3.5 – 4.0 litres per 25 kg bag
Pot life:	approx. 15 minutes at 20 °C after mixing
Ambient and substrate temperature:	min. + 5 °C, max. + 25 °C

Ecology

Water hazard class:	Class 1
Disposal code:	170101, 101314

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth.
Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption in kg/m², for joint width		
	Width	Length	5 mm	10 mm	15 mm
Sett paving	160	180	1,1	2.2	3,3
	140	180	1,2	2,4	3,5
	120	160	1,3	2,6	3,8
Block paving	100	120	1,7	3,4	4,8
	100	100	1,9	3,6	5,2
	80	100	2,1	4,0	5,8
	60	80	2,7	5,1	7,2
Mosaic paving	40	40	4,4	8,0	10,9
	50	50	3,6	6,7	9,2
	40	60	3,8	6,9	9,5
Slab paving	600	400	0,4	0,8	1,2
	400	400	0,5	1,0	1,5
	300	300	0,7	1,3	1,9
	200	200	1,0	1,9	2,8

Application


clean the surface free of residues


pre-wet the surfaces


pour in max. 3.5 – 4.0 l of water


add the jointing mortar


work in the mortar


do not let the mortar harden on the surface


clean diagonally to the joint


follow the curing notes!

Requirements:
Stable substrate, fill the continuously open, non pre-filled joint, joint width ≥ 5 mm, ≤ 50 mm, paved area temperature **min. 5 °C, max. 25 °C**.

Preparation:
Fix loose blocks. Protect gullies against penetrating joint material, e.g. with a filter fleece. Clean the area to be jointed free of residues. Remove loose particles from the joints and the block flanks.

Test area:
Cement-based jointing mortars are subject to the natural ageing process. To counteract this, the products are factory-set to harden rapidly. This ensures workability throughout the entire shelf life. The reaction speed must therefore be checked before jointing. On natural stone and concrete block paving, contact between **vdw 400** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**.
On absorbent paving we recommend using **vdw 950 StoneProtect 3 in 1**.

Wetting:
Pre-wet the surfaces. On natural stone with a rough surface, reconstituted stone or absorbent paving blocks, the surface must be wetted **very thoroughly** before applying **vdw 400**. On coated concrete slabs wet only lightly, because of their low absorbency. **Standing water in the joints must be avoided**.

Mixing the jointing mortar:
Pour 3.5 – 4.0 l of water per 25 kg bag into a clean mixing vessel. Add **vdw 400** and mix to a homogeneous, lump-free and pourable mortar. Part quantities can also be mixed in the corresponding mixing ratio.

Filling the joints:
Pour the mortar onto the wet surface, spread it over the paving with a rubber squeegee across the full area and work it intensively into the joints. Apply the mortar so that the joint cross-section is completely filled. Strike off surplus jointing mortar with the rubber squeegee. We recommend jointing from the highest to the lowest point.

Cleaning:
Avoid letting vdw 400 harden on the paving surface by using circular movements with a wet broom. After a sufficient hardening time (the joints can barely be pressed in – after approx. 25 min at 20 °C), wash the paving clean diagonally to the joint cross-section using floor washing equipment, a scrubber, a spray nozzle or a fan nozzle, without washing out the joints. Finally clean the stone surface free of residues with a spray jet.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Protect the setting mortar from drying out too quickly (direct sunlight, draughts) and from frost and temperatures < 5 °C and > 30 °C. Cordon off the freshly jointed areas for a period of at least 4 – 6 hours. The areas can then be walked on. Protect the freshly jointed areas from heavy rain for at least 12 hours. Do not lay sheeting directly on the surface, provide ventilation underneath. Loading of the area: accessible on foot after 4 – 6 hours, trafficable by cars after 3 days, fully loadable after 7 days. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 400 Cement Based Jointing Mortar is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding
• Lay paving or slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.
• Select the bedding mortar to suit the anticipated loads.

GftK Pro-Tip

Bound mortar beds:
chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints
• **Minimum joint depth:** The open, at least 20 mm deep, non pre-filled joint must be filled over its full depth.
• **Minimum joint width:** The joint width for **vdw 400** is at least 5 mm, maximum 50 mm.
• For joint widths ≥ 15 mm the jointing depth must be at least twice the joint width.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate must be carried through. Joint with a suitable elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples



vdw 400is suitable for the water-impermeable jointing of setts and slabs.



Suitable for natural stone, concrete, clinker or ceramic paving.

vdw 415 – Cement Based Jointing Mortar Color

NEW from 2026

Cement-based, rapid-hardening, early-loadable and frost-proof flexible jointing mortar for the easy jointing of ceramic, concrete and reconstituted stone slabs.



for pedestrian traffic



impermeable to water



joint width ≥ 2 mm ≤ 20 mm



suitable for high-pressure cleaners

- beige
- grey
- anthracite

Further properties

- self-compacting
- particularly easy to work in and wash off
- water- and dirt-repellent
- compressive strength 15 N/mm²
- high early strength
- can be mixed in part quantities

➡ complete joint filling even in narrow joints
➡ homogeneous joint surface & clean paving
➡ low-maintenance joints
➡ resistant to domestic high-pressure cleaners
➡ walkable after 2 hours / loadable after 12 hours
➡ also suitable for jointing individual joints

Technical Data

Product description
Cement-based, rapid-hardening, early-loadable and frost-proof flexible jointing mortar

Binder:	selected special cements
Joint width:	continuously at least 2 mm*, max. 20 mm
Joint depth:	fill the continuously open, non pre-filled joint
Packaging:	15 kg bag

Material data

Compressive strength:	after 28 days – 15 N/mm² to DIN EN 13888 CG2 WA
Water permeability:	impermeable to water
Storage life:	12 months, stored dry and frost-free

Application data

Added water:	2.85 – 3.3 l per 15 kg bag
Pot life:	approx. 30-40 minutes at 23 °C and 50 % relative humidity after mixing. Stiffened mortar must not be made workable again either with water nor with fresh mortar.
Ambient and substrate temperature:	min. + 5 °C, max. + 25 °C

Ecology

Water hazard class:	Class 1
Disposal code:	170101, 101314

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

To calculate the quantity of jointing mortar required, please use our consumption calculator at: www.gftk-info.de/verbrauchsrechner

Application



clean the surface free of residues



pre-wet the surface



pour in 2.8 – max. 3.3 l of water



add the jointing mortar / observe the maturing time



work in the mortar



do not let the mortar harden on the surface



clean diagonally to the joint



follow the curing notes

Requirements:
Stable, load-bearing substrate, continuously open, non pre-filled joints, joint width min. 2 mm, max. 20 mm, paved area temperature **min. 5 °C, max. 25 °C**.

Preparation:
Stabilise loose paving elements. Protect gullies against penetrating joint material, e.g. with a filter fleece. Clean the area to be jointed free of residues. Remove loose particles from the joints and the block flanks.

Test area:
On natural stone and concrete block paving, contact between **vdw 415** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect 3 in 1**.

Wetting:
On natural stone with a rough surface, reconstituted stone or absorbent paving blocks, the surface must be wetted **to saturation** before applying **vdw 415**. On coated concrete slabs and ceramic terrace elements pre-wetting is not necessary, because of their low or non-existent absorbency. **Standing water in the joints must be avoided.**

Mixing the jointing mortar:
Pour 2.85 – 3.3 l of water per 15 kg bag into a clean mixing vessel. Add **vdw 415** and mix to a homogeneous, pourable mortar. Then leave to mature for 3 – 5 minutes and mix briefly again. Settling of the mineral aggregate (sedimentation) must be avoided. Part quantities can also be mixed in the corresponding mixing ratio.

Filling the joints:
Pour the mortar onto the wet surface and work it intensively into the joints with a jointing board under light pressure. Apply the mortar so that the joint cross-section is completely filled. Strike off surplus jointing mortar with the jointing board.

Cleaning:
Caution: Avoid letting vdw 415 harden on the paving surface by using circular movements with a wet sponge board as soon as the mortar turns matt on the surface. After a sufficient hardening time (the joints can barely be pressed in – after approx. 30 min at 23 °C), clean the paving diagonally to the joint cross-section with a sponge board or floor washing machine, without washing out the joints.

Curing:
The following points refer to a temperature of 23 °C and 50 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Protect the setting mortar from drying out too quickly (direct sunlight, draughts) and from frost and temperatures < 5 °C and > 30 °C. Cordon off the freshly jointed areas for a period of at least 2 hours. The areas can then be walked on. Protect the freshly jointed areas from heavy rain for at least 12 hours. Do not lay sheeting directly on the surface, provide ventilation underneath. Loading of the area: accessible on foot after approx. 2 hours, mechanically loadable after approx. 12 hours. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 415 Cement Based Jointing Mortar Color is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated load.

Bedding
• Lay paving or slabs in a free-draining concrete or mortar bed; we recommend **vdw 470 Landscaping Drain Mortar** or **vdw 480 Bedding Compound** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.
• Select the bedding mortar to suit the anticipated loads.

GftK Pro-Tip
Bound mortar beds:
chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints
• **Minimum joint depth:** The open, at least 20 mm deep, non pre-filled joint must be filled over its full depth.
• **Minimum joint width*:** The joint width for **vdw 415** is at least 2 mm, maximum 20 mm.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate must be carried through. Joint with a suitable elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples





vdw 800 – 2K Paving Joint Mortar

For jointing natural stone setts, concrete block paving and clinker paving on patios, paths, in pedestrian zones and passageways.



for light traffic loads



permeable to water



joint width ≥ 5 mm

- natural



- stone grey



- basalt



Further properties

- fast, economical and durable jointing
- clean paved surfaces
- water permeable
- self-compacting
- mechanical sweeper resistant
- abrasion resistant
- highly frost and de-icing salt resistant
- durably filled joints
- reduced risk of accidents
- variable consistency

Technical Data

Product description
Reaction-resin based, water permeable paving joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, water emulsifiable epoxy resin
Joint width:	continuously at least 5 mm*
Joint depth:	min. 30 mm, full joint depth on areas with vehicle traffic; for joint widths ≥ 15 mm the jointing depth must be at least twice the joint width
Packaging:	PP bucket 25 kg, PP bucket 10 kg

Material data

Flexural strength:	approx. 5.0 N/mm²
Adhesive tensile strength:	ca. 1,5 N/mm ²
Compressive strength:	approx. 15.0 N/mm²
E-Modulus:	approx. 3400 N/mm²
Water permeability:	5,08 · 10^{-3} m/s (approx. 60 l/m²/min at 20 % joints)
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 3,6
Pot life:	approx. 15 minutes at 20 °C after mixing
Outside temperature:	min. 7 °C, max. 30 °C
Substrate temperature:	min. 7 °C, max. 30 °C
Material temperature:	min. 7 °C, max. 30 °C

Ecology

Water hazard class:	Hardener comp.: Class 1, resin comp.: Class 2
Disposal code:	Hardener comp.: 080409, 080410, 080499, resin comp.: 080409, 080413, 080499

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth.
Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption kg/m² for joint widths		
	Width	Length	5 mm	10 mm	15 mm
Mosaic paving	40	40	3,6	6.4	8,7
	50	50	2,9	5,3	7,4
	40	60	3,0	5.5	7,6
Block paving	100	120	1,4	2,7	3,9
	100	100	1,5	2,9	4,2
	80	100	1,7	3,2	4,6
	60	80	2.2	4,1	5,7
Sett paving	160	180	0,9	1,8	2,6
	140	180	1,0	1,9	2,8
	120	160	1,1	2.2	3,1

Application

You will find further information in this application video



Clean the surface completely
Saturate the surface



add the binder components



Add max. twice the quantity of water



Mix until homogeneous



work in the mortar



Sweep off with a damp coconut brush



follow the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint depth ≥ 30 mm (full joint depth on areas with vehicle traffic), joint width continuously ≥ 5 mm, outside and surface temperature min. 7 °C, max. 30 °C.

Test area:
On some paving materials, contact between **vdw 800 Epoxy Paving Joint Mortar** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting, mixing and cleaning!

Mixing the joint mortar:
To the aggregate already pre-mixed with one binder component, add the contents of the binder bottle lying in the bucket and at most twice that quantity of water (measured with the binder bottle), and mix until homogeneous.

Filling the joints:
Pull the mortar over the whole wet surface with a hard rubber squeegee and work it thoroughly into the joints. It is advisable to joint from the highest to the lowest point.

Brushing off / cleaning:
After approx. 15 – 20 minutes (at 20 °C) brush the excess, semi-dry mortar off the surface with a **damp** coconut fibre brush until it is completely removed. Do not sweep mortar residues into joints that are still open. Clean the brush frequently in water.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed). Cordon off the freshly jointed areas for a period of at least 12 hours. The areas can then be walked on. Protect the freshly jointed areas from moisture for a period of at least 12 hours (do not lay sheeting directly on the paving, provide ventilation underneath). Final release of the areas to traffic after 7 days. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 800 Epoxy Paving Joint Mortar is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load. **vdw 800** is not suitable for jointing large-format slabs (edge length > 600 mm) or ceramic patio elements.

Bedding
• **Pedestrian loading:** laying the setts or slabs in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.
• **Vehicle loading:** setts or slabs must be laid in a free-draining concrete or mortar bed to suit the loads occurring – we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.

GftK Pro-Tip
Bound mortar beds:
chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints
• **Minimum joint depth:** The minimum joint depth for **vdw 800 Epoxy Paving Joint Mortar** is 30 mm, on areas with vehicle traffic the full joint depth. Where slab paving laid in a free-draining mortar bed with an adhesive slurry is jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.
• **Minimum joint width:** The minimum joint width for **vdw 800 Epoxy Paving Joint Mortar** is 5 mm.
• For joint widths ≥ 15 mm the jointing depth must be at least twice the joint width.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples



By reducing the mixing water, **vdw 800** can also be mixed to a trowellable consistency for vertical joints.



Because the flow consistency can be adjusted in this way, **vdw 800** is outstandingly suited to steep falls.

vdw 815 plus – 2K Slab Joint Mortar

For jointing slab paving with narrow joints from 3 mm.



for light traffic loads



clean surface



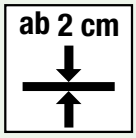
permeable to water



no covering



joint width ≥ 3 mm



especially for thin-layer paving

- natural



- stone grey



- basalt



New formula!

Exceptionally free-flowing!

Further properties

- fast, economical and durable jointing
- clean paved surfaces
- water permeable
- self-compacting
- free flowing
- mechanical sweeper resistant
- abrasion resistant
- highly frost and de-icing salt resistant
- durably filled joints
- Ideal for adjacent pool areas and for surfaces exposed to chlorinated water
- can be applied in the rain and at low temperatures

Technical Data

Product description
Reaction-resin based, water permeable joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, highly modified, water emulsifiable epoxy resin
Joint width:	continuously at least 3 mm*
Joint depth:	full joint depth on areas with vehicle traffic, in bonded bedding min. 20 mm, in unbonded bedding min. 30 mm
Packaging:	PP bucket 10 kg

Material data

Flexural strength:	approx. 9.0 N/mm²
Adhesive tensile strength:	approx. 0.8 N/mm²
Compressive strength:	approx. 20.0 N/mm²
E-Modulus:	3.900 N/mm ²
Water permeability:	$0.67 \cdot 10^{-3}$ m/s (approx. 4 l/m²/min at 10 % joints)
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 2.5
Pot life:	approx. 10 minutes at 20 °C after mixing
Outside temperature:	min. 3 °C, max. 25 °C
Substrate temperature:	min. 3 °C, max. 25 °C

Ecology

Water hazard class:	Resin component: Class 2, Hardener component: Class 2
Disposal code:	Resin component: 080410, 080499 Hardener component: 080409, 080413, 080499

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth. **Also use our consumption calculator at:**
www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption kg/m² for joint widths		
	Width	Length	3 mm	4 mm	5 mm
Slab paving	600	400	0,2	0,2	0,3
	500	500	0,2	0,2	0,3
	500	400	0,2	0,3	0,3
	400	400	0,2	0,3	0,4
	300	300	0,3	0,4	0,5
	200	200	0,4	0,6	0,7

Application

You will find further information in this application video


clean the surface free of residues and pre-wet it


add the binder components


Mix until homogeneous


work in the mortar


Clean with a hose spray ...


... and a damp coconut brush


follow the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint depth ≥ 30 mm (full joint depth on areas with vehicle traffic), joint width continuously ≥ 3 mm, outside and surface temperature min. 3 °C to **max. 25 °C**.

Test area:
On some paving materials, contact between **vdw 815 plus Slab Joint Mortar** and the stone surface may cause visual changes such as darkening and/or spotting. Because of the large number of surface-treated concrete blocks in particular, a compatibility test beforehand is necessary in individual cases. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting and cleaning!

Mixing the joint mortar:
Pre-mix the aggregate, then add the binder and mix until homogeneous for approx. 3 minutes with a drill and paddle mixer. Unmixed constituents must not be applied. **No water may be added to the mix.**

Filling the joints:
Work the mortar into the joints **immediately** with a hard rubber squeegee – as far as possible diagonally to the joint. A water spray can be used to increase the flowability of the joint mortar. **The surface should be kept constantly wet during application.** We recommend working from the highest point downwards in the direction of the fall.

Brushing off / cleaning:
Immediately **clean the excess mortar off the surface with a light, continuous water spray until it has been completely removed.** Make sure that cleaning is carried out towards areas that have not yet been jointed. Sweep off the last mortar residues with a coconut fibre brush, **damp if necessary**. Do not sweep mortar residues into joints that are still open. Take care that neither rinsing water nor mortar residues remain on the surface.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly jointed areas for a period of at least 24 hours, or until the paving surface is no longer tacky. The areas can then be walked on. Final release of the areas to traffic after 3 – 5 days at the earliest. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 815 plus Slab Joint Mortar is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding
• **Pedestrian loading:** laying the slabs in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.
• **Vehicle loading:** the slabs must be laid in a free-draining concrete or mortar bed to suit the loads occurring – we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.

GftK Pro-Tip
Bound mortar beds:
chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints
• Minimum joint depth: the minimum joint depth for **vdw 815 plus Slab Joint Mortar** is 30 mm, on areas with vehicle traffic the full joint depth. **Where slab paving laid in a free-draining mortar bed with an adhesive slurry is jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.**
• Minimum joint width: the minimum joint width for **vdw 815 plus Slab Joint Mortar** is 3 mm.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.

"clean" working

Further information on page 150




Clean shoe soles regularly – this prevents footprints on the surface




Rinse the brush more often – it then picks up more mortar residue and makes cleaning easier

vdw 815 ultra – 2K Slab Joint Mortar

NEW from 2026

The slab jointing mortar for the narrow joint. Highly free flowing, self-compacting and workable even at low temperatures and in the rain. Virtually no binder film. Ideally suited to natural stone and ceramic slabs.



for light traffic loads



clean surface



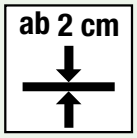
permeable to water



no covering



joint width ≥ 4 mm



especially for thin-layer paving

- natural



- stone grey



- basalt



The premium mortar for modern slab paving.

Further properties

- fast, economical and durable jointing
- clean paved surfaces
- water permeable
- self-compacting
- free flowing
- mechanical sweeper resistant
- abrasion resistant
- highly frost and de-icing salt resistant
- durably filled joints
- reduced risk of accidents
- can be applied in the rain and at low temperatures

Technical Data

Product description
Reaction-resin based, water permeable joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, highly modified, water emulsifiable epoxy resin
Joint width:	continuously at least 4 mm*
Joint depth:	full joint depth on areas with vehicle traffic, in bonded bedding min. 20 mm, in unbonded bedding min. 30 mm
Packaging:	PP bucket 10 kg

Material data

Flexural strength:	approx. 9.0 N/mm²
Adhesive tensile strength:	approx. 0.8 N/mm²
Compressive strength:	approx. 20.0 N/mm²
E-Modulus:	approx. 3,900 N/mm²
Water permeability:	$0.67 \cdot 10^{-3}$ m/s (approx. 4 l/m²/min at 10 % joints)
Storage life:	9 months, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 2.5
Pot life:	approx. 10 minutes at 20 °C after mixing
Outside temperature:	min. 3 °C, max. 25 °C
Substrate temperature:	min. 3 °C, max. 25 °C

Ecology

Water hazard class:	Resin component: Class 2, Hardener component: Class 2
Disposal code:	Resin component: 080410, 080499 Hardener component: 080409, 080413, 080499

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth.
Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption kg/m² for joint widths	
	Width	Length	4 mm	5 mm
Slab paving	600	400	0,2	0,3
	500	500	0,2	0,3
	500	400	0,3	0,3
	400	400	0,3	0,4
	300	300	0,4	0,5
	200	200	0,6	0,7

Application

You will find further information in this application video



clean the surface free of residues and pre-wet it



add the binder components



Mix until homogeneous



work in the mortar



Clean with a hose spray ...



... and a damp coconut brush



follow the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint depth ≥ 30 mm (full joint depth on areas with vehicle traffic), joint width continuously ≥ 3 mm, outside and surface temperature min. 3 °C to **max. 25 °C**.

Test area:
On some natural stone and concrete slabs, contact between **vdw 815 ultra Slab Joint Mortar** and the stone surface may cause visual changes such as darkening and/or spotting. Because of the large number of surface-treated concrete blocks in particular, a compatibility test beforehand is necessary in individual cases. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect Plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting and cleaning!

Mixing the joint mortar:
Pre-mix the aggregate, then add the binder and mix until homogeneous for approx. 3 minutes with a drill and paddle mixer. Unmixed constituents must not be applied. **No water may be added to the mix.**

Filling the joints:
Work the mortar into the joints **immediately** with a hard rubber squeegee – as far as possible diagonally to the joint. A water spray can be used to increase the flowability of the joint mortar. **The surface should be kept constantly wet during application.** We recommend working from the highest point downwards in the direction of the fall.

Brushing off / cleaning:
Immediately **clean the excess mortar off the surface with a light, continuous water spray until it has been completely removed.** Make sure that cleaning is carried out towards areas that have not yet been jointed. Sweep off the last mortar residues with a coconut fibre brush, **damp if necessary**. Do not sweep mortar residues into joints that are still open. Take care that neither rinsing water nor mortar residues remain on the surface.

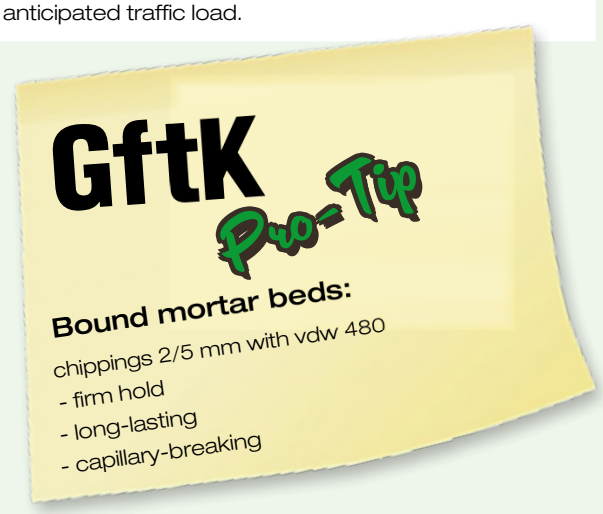
Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly jointed areas for a period of at least 24 hours, or until the paving surface is no longer tacky. The areas can then be walked on. Final release of the areas to traffic after 3 – 5 days at the earliest. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 815 ultra Slab Joint Mortar is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding
• **Pedestrian loading:** laying the slabs in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.

• **Vehicle loading:** the slabs must be laid in a free-draining concrete or mortar bed to suit the loads occurring – we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.



Joints
• Minimum joint depth: the minimum joint depth for **vdw 815 ultra Slab Joint Mortar** is 30 mm, on areas with vehicle traffic the full joint depth. **Where slab paving laid in a free-draining mortar bed with an adhesive slurry is jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.**
• Minimum joint width: the minimum joint width for **vdw 815 ultra Slab Joint Mortar** is 4 mm.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples





vdw 830 – 2K Paving Joint Mortar

For the coloured design of joints in natural stone setts, concrete blocks and clinker paving on patios, paths, passageways and garage driveways.



for light traffic loads



permeable to water



joint width ≥ 5 mm

- black



- orange



- green



- yellow



- red



Further properties

- coloured joints that do not fade
- fast, economical and durable jointing
- clean paved surfaces
- water permeable
- self-compacting
- mechanical sweeper resistant
- abrasion resistant
- highly frost and de-icing salt resistant
- durably filled joints
- reduced risk of accidents
- variable consistency

Technical Data

Product description
Reaction-resin based, water permeable paving joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, water emulsifiable epoxy resin
Joint width:	continuously at least 5 mm*
Joint depth:	min. 30 mm; for areas with vehicle traffic we recommend the full joint depth; for joint widths ≥ 15 mm the jointing depth must be at least twice the joint width
Packaging:	2 bottles of 1 kg resin / hardener each, 25 kg bag of aggregate mix

Material data

Flexural strength:	approx. 5.0 N/mm²
Compressive strength:	approx. 15.0 N/mm²
E-Modulus:	approx. 3400 N/mm²
Water permeability:	5,08 · 10^{-3} m/s (approx. 60 l/m²/min at 20 % joints)
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B : sand = 1 : 1 : 25
Pot life:	approx. 15 minutes at 20 °C after mixing
Outside temperature:	min. 7 °C, max. 30 °C
Substrate temperature:	min. 7 °C, max. 30 °C
Material temperature:	min. 7 °C, max. 30 °C

Ecology

Water hazard class:	Resin component:	Class 2	(clear liquid)
	Hardener component:	Class 2	(yellow liquid)
Disposal code:	Resin component:	080410, 080413, 080499	(clear liquid)
	Hardener component:	080410, 080499	(yellow liquid)

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth.
Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption kg/m² for joint widths, at 10 mm joint depth		
	Width	Length	5 mm	10 mm	15 mm
Mosaic paving	40	40	3,3	6,0	8,2
	50	50	2,7	5,0	6,9
	40	60	2,8	4,8	7,1
Block paving	100	120	1,3	2,5	3,6
	100	100	1,4	2,7	3,9
	80	100	1,6	3,0	4,3
	60	80	2,0	3,8	5,4
Sett paving	160	180	0,9	1,7	2,4
	140	180	0,9	1,8	2,6
	120	160	1,1	2,0	3,0

Application



clean the surface free of residues and pre-wet it



put in the aggregate first



add the binder components



Add max. 1 l of water and mix until homogeneous



work in the mortar



Sweep off with a damp coconut brush



follow the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint depth ≥ 30 mm (full joint depth on areas with vehicle traffic), joint width continuously ≥ 5 mm, outside and surface temperature min. 7 °C, max. 30 °C.

Test area:
On some paving materials, contact between **vdw 830 Epoxy Paving Joint Mortar Colour** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting, mixing and cleaning!

Mixing the joint mortar:
Add the aggregate, the bottle contents and up to 1 l of water; mix until homogeneous.

Filling the joints:
Pull the mortar over the whole wet surface with a hard rubber squeegee and work it well into the joints.

Brushing off / cleaning:
After approx. 15 – 20 minutes (at 20 °C) brush the excess, semi-dry mortar off the surface with a **damp** coconut fibre brush until it is completely removed. Do not sweep mortar residues into joints that are still open. Clean the brush frequently in water.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed). Cordon off the freshly jointed areas for a period of at least 12 hours. The areas can then be walked on. Protect the freshly jointed areas from moisture for a period of at least 12 hours (do not lay sheeting directly on the paving, provide ventilation underneath). Final release of the areas to traffic after 7 days. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate

vdw 830 Epoxy Paving Joint Mortar Colour is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load. **vdw 830** is not suitable for jointing large-format slabs (edge length > 600 mm) or ceramic patio elements.

Bedding

• **Pedestrian loading:** laying the setts or slabs in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.

• **Vehicle loading:** setts or slabs must be laid in a free-draining concrete or mortar bed to suit the loads occurring – we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar**/**vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.

Joints

• **Minimum joint depth:** The minimum joint depth for **vdw 830 Epoxy Paving Joint Mortar Colour** is 30 mm, on areas with vehicle traffic the full joint depth. Where slab paving laid in a free-draining mortar bed with an adhesive slurry is jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.

• **Minimum joint width:** The minimum joint width for **vdw 830 Epoxy Paving Joint Mortar Colour** is 5 mm.

• For joint widths ≥ 15 mm the jointing depth must be at least twice the joint width.

• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.

• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples





vdw 840 plus – 1K Jointing Mortar

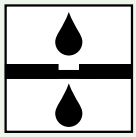
For jointing natural stone and concrete block paving, slabs and clinker paving on garden paths, house entrance areas and patios.



for pedestrian traffic



clean surface



permeable to water



especially for coated concrete block



joint width ≥ 3 mm

- natural



- stone grey



- basalt



- silver grey



Further properties

- can be slurried in with water, **without** loss of quality
- no manual re-compaction, self-compacting effect
- can be applied in light rain
- suitable for narrow joints from 3 mm
- virtually binder-film-free surfaces
- ready to use
- suitable for ceramic patio elements

Technical Data

Product description
Ready-to-use joint mortar curing with atmospheric oxygen, with graded mineral aggregates.

Binder:	1-component, highly modified liquid polymer curing with atmospheric oxygen
Joint width:	continuously at least 3 mm*, maximum 20 mm
Joint depth:	min. 30 mm; for joint widths ≥ 15 mm the jointing depth must be at least twice the joint width
Packaging:	12.5 kg and 25 kg PE sack (vacuum-packed) in a PP bucket

Material data

Flexural strength:	ca. 8,0 N/mm ²**
Adhesive tensile strength:	ca. 1,5 N/mm ²**
Compressive strength:	ca. 17,0 N/mm ²**
E-Modulus:	3.900 N/mm ²
Water permeability:	1,7 x 10^{-5} m/s (approx. 3 l/m²/h at 5 % joints)
Storage life:	18 months, stored dry

Application data

Pot life:	approx. 45 minutes at 20 °C
Outside temperature:	min. 5 °C, max. 25 °C
Substrate temperature:	min. 5 °C, max. 25 °C

Ecology

Water hazard class:	Class 1
Disposal code:	080112, 010409, 080199

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

(** based on DIN standards)

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth. **Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner**

	Dimensions in mm		approx. consumption kg/m² for joint widths			
	Width	Length	3 mm	5 mm	10 mm	15 mm
Mosaic paving	40	40	2,4	3,8	6,8	9,3
	50	50	1,9	3,1	5,7	7,9
	40	60	2,0	3,2	5,8	8,1
Block paving	100	120	0,9	1,5	2,9	4,1
	100	100	1,0	1,6	3,1	4,4
	80	100	1,1	1,8	3,4	4,9
	60	80	1,4	2,3	4,3	6,1
Sett paving	180	180	0,6	0,9	1,8	2,6
	140	160	0,7	1,1	2,1	3,1
	120	160	0,7	1,2	2,3	3,3
	100	200	0,7	1,2	2,4	3,4
Slab paving	600	400	0,2	0,4	0,7	1,0
	400	400	0,3	0,4	0,8	1,2
	300	300	0,3	0,6	1,1	1,6

Application

You will find further information in this application video



Clean the surface completely, open the vacuum bag



Saturate the surface



Apply the mortar in portions



Use a hard rubber squeegee and a water spray to work it in



Clean the surface with a soft water spray



Remove any last mortar residues with a coconut fibre brush



follow the curing notes!

Compared with the usual 1-component jointing mortars curing with atmospheric oxygen, **vdw 840 plus 1K Jointing Mortar** stands out for its higher strength and for the fact that the mortar can be slurried in with a water jet.

Requirements:
A stable, load-bearing and permanently water permeable substrate, joint depth ≥ 30 mm, joint width continuously ≥ 3 mm, **max. 20 mm**, surface and outside temperature min. 5 °C, max. 25 °C.

Test area:
On some paving materials, contact between **vdw 840 plus 1K Jointing Mortar** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting and cleaning!

Filling the joints:
Cut open the PE sack. Then take part of the mortar out of the container, place it on the wet surface and **slurry** it into the joints with a soft water jet and a hard rubber squeegee. Clean excess mortar residues off the paving surface with a water spray, without washing out the joints. Repeat these steps until all the mortar has been applied. A slight binder film may remain, depending on the type of stone. Sweep the paving surface with a damp coconut fibre brush and smooth the joint surface as you do so. Chamfers must be swept clear!

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly jointed areas for a period of at least 24 hours. The areas can then be walked on. **Protect the freshly jointed areas from moisture for a period of at least 24 hours.** Exposure to moisture during the hardening phase can delay or impair the development of the final strengths. Final release of the areas after 7 days. In principle a strength test should be carried out before the areas are put into service.

Important Notes

vdw 840 plus 1K Jointing Mortar is not suitable for indoor use because of its characteristic odour, and must not be used in wells or ponds or in areas adjoining swimming pools. Waterlogging – caused for example by a sub-base or surfacing that is not free-draining, or by the use of highly alkaline or strongly acidic cleaners – can permanently damage the joint. The jointed areas are not resistant to high-pressure cleaning, but can be cleaned with commercially available chlorine-free cleaners where necessary. Because of the raw materials used, the joint surface may sand down slightly; this is not a quality defect. If the jointed area is exposed to differing weather conditions (e.g. covered/uncovered areas), the joints may take on differing appearances, which does not constitute a defect. If the PE sack is damaged, the material reacts prematurely and forms lumps; the product can then no longer be applied. Opened containers must be used up and applied completely within the pot life.

Substrate

vdw 840 plus 1K Jointing Mortar is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding

• Laying the setts or slabs in a stable, permanently free-draining sand or chipping bed is sufficient. Better: lay the setts or slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.

GftK Pro-Tip

Bound mortar beds:

chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints

• **Minimum joint depth:** The minimum joint depth for **vdw 840 plus 1K Jointing Mortar** is 30 mm. Where slab paving laid in a free-draining mortar bed with an adhesive slurry is jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.
• **Minimum joint width:** The joint width for **vdw 840 plus 1K Jointing Mortar** is at least 3 mm, **max. 20 mm.**
• For joint widths ≥ 15 mm the jointing depth must be at least twice the joint width.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.

Exposing the chamfer

Further information on page 149







Watch the video example here:

After cleaning, the chamfers of chamfered paving must always be exposed as the last working step, in order to avoid joints breaking out later.

vdw 850 plus – 2K Jointing Mortar self-compacting

For jointing natural stone setts, concrete block paving and clinker paving on traffic areas and trafficked surfaces.



for light to medium traffic loads



clean surface



permeable to water



no covering



joint width ≥ 5 mm



for particularly wide joints

- natural



- stone grey



- basalt



Further properties

- fast, economical and durable jointing
- clean paved surfaces
- water permeable
- self-compacting
- mechanical sweeper resistant
- abrasion resistant
- highly frost and de-icing salt resistant
- durably filled joints
- can be applied in the rain and at low temperatures
- reduced risk of accidents

Technical Data

Product description
Reaction-resin based paving joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, water emulsifiable epoxy resin
Joint width:	continuously at least 5 mm*
Joint depth:	min. 30 mm, full block height on areas with vehicle traffic; for joint widths ≥ 15 mm the joint depth must be at least twice the joint width
Packaging:	PP bucket 25 kg

Material data

Flexural strength:	ca. 10,0 N/mm ²
Adhesive tensile strength:	ca. 1,5 N/mm ²
Compressive strength:	ca. 33,0 N/mm ²
E-Modulus:	ca. 5500 N/mm ²
Water permeability:	1,5 x 10^{-4} m/s (approx. 1.8 l/m²/min at 20 % joints)
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 2,7
Pot life:	approx. 10 minutes at 20 °C after mixing
Outside temperature:	min. 3 °C, maximum 25 °C
Substrate temperature:	min. 3 °C, maximum 25 °C

Ecology

Water hazard class:	Resin component: Class 2, hardener component: Class 2
Disposal code:	Resin component: 080410, 080499, Hardener component: 080409, 080413, 080499

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth.
Also use our consumption calculator at:
www.gftk-info.de/verbrauchsrechner

	Dimensions in mm		approx. consumption kg/m² for joint widths		
	Width	Length	5 mm	10 mm	15 mm
Mosaic paving	40	40	3,8	6,8	9,3
	50	50	3,1	5,7	7,8
	40	60	3,2	5,8	8,0
Block paving	100	120	1,5	2,9	4,1
	100	100	1,6	3,1	4,4
	80	100	1,8	3,4	4,9
	60	80	2,3	4,3	6,1
Sett paving	160	180	1,0	1,9	2,8
	140	180	1,0	2,0	3,0
	120	160	1,2	2,3	3,3

Application

You will find further information in this application video



Clean the surfaces completely, pre-wet the surface



add the binder components



Mix until homogeneous



work in the mortar



Clean with a hose spray ...



... and a damp coconut brush



follow the curing notes!

Requirements:
vdw 850 plus needs a stable, load-bearing and permanently water permeable substrate. The joint depth must be ≥ 30 mm (full joint depth on areas with vehicle traffic) and the joint width continuously ≥ 5 mm. The joint mortar can be used at a paving and air temperature of min. 3 °C to max. 25 °C. From a consumption of ≥ 4 kg/m² upwards, **vdw 850 plus** can be used universally on setts, slabs and clinker paving.

Test area:
On some paving materials, contact between **vdw 850 plus Jointing Mortar self-compacting** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting and cleaning!

Mixing the joint mortar:
Pre-mix the aggregate/binder blend, then add the binder and mix until homogeneous for approx. 3 minutes.
No water may be added to the mix!

Filling the joints:
Work the mortar into the joints **immediately** with a hard rubber squeegee – as far as possible diagonally to the joint. A water spray can be used to increase the flowability of the joint mortar. **The surface should be kept constantly wet during application.** We recommend working from the highest point downwards in the direction of the fall.

Brushing off / cleaning:
Immediately **clean the excess mortar off with a water spray**, without washing out the joints. Make sure that cleaning is carried out towards areas that have not yet been jointed and that the stone surface is cleaned as well. Sweep off the last mortar residues with a **damp** coconut fibre brush.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly jointed areas for a period of at least 24 hours, or until the paving surface is no longer tacky. The areas can then be walked on. Final release of the areas to traffic after 3 – 5 days at the earliest. In principle a strength test should be carried out before the areas are put into service.

Important Notes

vdw 850 plus 2K Jointing Mortar self-compacting is not recommended for jointing slab paving. (Exception: polygonal slabs with a high proportion of joints, or slab paving with a consumption of at least 4 kg/m².)

Substrate
vdw 850 plus Jointing Mortar self-compacting is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding
• **Pedestrian loading:** laying the setts and slabs in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar/vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.
• **Vehicle loading:** the setts and slabs must be laid in a free-draining concrete or mortar bed to suit the loads occurring – we recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar/vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.

GftK Pro-Tip
Bound mortar beds:
chippings 2/5 mm with vdw 480
- firm hold
- long-lasting
- capillary-breaking

Joints
• **Minimum joint depth:** The minimum joint depth for **vdw 850 plus Jointing Mortar self-compacting** is 30 mm, on areas with vehicle traffic the **full joint depth**. Where polygonal slabs laid in a free-draining mortar bed with an adhesive slurry are jointed, the minimum joint depth may be reduced to 20 mm in pedestrian areas.
• **Minimum joint width:** The minimum joint width for **vdw 850 plus Jointing Mortar self-compacting** is 5 mm. For joint widths ≥ 15 mm the joint depth must be at least twice the joint width.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with an elastic joint material. We recommend **vdw 885 plus FugenFlex**.

Further application examples



For slab bonds with wide joints, **vdw 850 plus** is ideal for filling the joints.



Permanently easy-care surfaces, in public spaces too.

vdw 855 – 2K Jointing Mortar high-compaction

For jointing natural stone setts, concrete block paving and clinker paving on squares, paved roads, driveways, loading zones and in historic town centres.



for light to heavy traffic loads



clean surface



no covering



permeable to water



joint width ≥ 8 mm

- sand-coloured



- stone grey



- basalt



Can be applied in the rain, no covering required!

Further properties

- fast setting time
- early release to traffic
- durable jointing
- clean paved surfaces
- self-compacting
- mechanical sweeper resistant
- highly frost and de-icing salt resistant
- durably filled joints
- reduced risk of accidents
- low water permeability / when properly compacted impermeable to water

Technical Data

Product description
Reaction-resin based joint mortar with graded mineral aggregates.

Binder:	2-component, solvent-free, water emulsifiable epoxy resin
Joint width:	continuously at least 8 mm*
Joint depth:	full joint depth
Packaging:	PP bucket 25 kg

Material data

Flexural strength:	ca. 14,0 N/mm ²
Adhesive tensile strength:	ca. 1,9 N/mm ²
Compressive strength:	ca. 50,0 N/mm ²
E-Modulus:	approx. 8500 N/mm²
Water permeability:	without subsequent compaction of the joints: $2{,}0 \times 10^{-5}$ m/s (approx. 0.23 l/m²/min at 20 % joints)
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 3,6
Pot life:	approx. 5 minutes at 20 °C after mixing
Outside temperature:	min. 3 °C, maximum 25 °C
Substrate temperature:	min. 3 °C, maximum 25 °C

Ecology

Water hazard class:		
Disposal code:	Resin component:	Class 2
	Hardener component:	Class 2
	Resin component:	080410, 080499
	Hardener component:	080409, 080413, 080499

***Note on the joint width**
The minimum joint width stated in our technical data sheets does not describe the target joint width to be planned or built for the paving. Rather, it indicates the joint width from which our jointing mortars can be applied reliably and functionally – including in those parts of a joint that may turn out locally narrower, e.g. because of dimensional tolerances of the paving materials.
The planning and execution of joint widths always follow the recognised rules of engineering, in particular the requirements of ZTV-Wegebau, ZTV-Pflaster-StB, ATV DIN 18318 or other relevant standards and guidelines for paving and slab surfaces. These define the minimum joint widths required for different construction methods and load classes to ensure a permanently functional construction.

Consumption

The consumptions stated in the table refer to setts cut on all sides and laid as coursed paving, and are based on our many years of experience. The natural shape of the setts and different laying patterns may result in deviations. If in doubt, determine the consumption on a test area. The values refer to a joint depth of **10 mm** and must be multiplied by the actual joint depth. **Also use our consumption calculator at: www.gftk-info.de/verbrauchsrechner**

	Dimensions in mm		approx. consumption kg/m² for joint widths		
	Width	Length	10 mm	15 mm	20 mm
Block paving	100	120	2,9	4,2	5,4
	100	100	3,2	4,6	5,8
	80	100	3,5	5,0	6.4
	60	80	4,4	6,3	7,9
Sett paving	160	180	2,0	2,8	3.7
	140	180	2,1	3,0	3,9
	120	160	2,4	3,4	4,4

Application



clean the surface free of residues



Minimum joint width 8 mm



pre-wet the surface



add the binder components



mix until homogeneous



work in the mortar



clean off with a water jet and a damp broom



Bear in mind post-treatment!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint width continuously ≥ 8 mm, **joint depth: the full joint depth down to the rising bedding mortar**, outside temperature and temperature of the paving min. 3 °C, **max. 25 °C**.

Test area:
On some paving materials, contact between **vdw 855 Jointing Mortar high-compaction** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**. On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface to be jointed free of any residues.

Wetting:
Saturate the surface thoroughly. Always use clean, cool tap water for wetting and cleaning!

Mixing the joint mortar:
Pre-mix the aggregate/binder blend, then add the binder and mix until homogeneous for approx. 3 minutes.
No water may be added to the mix!

Filling the joints:
Pull the mortar **immediately** over the whole wet surface with a hard rubber squeegee and work it thoroughly into the joints. As the flowability decreases, wet the mortar again lightly with a water spray. It is advisable to joint from the highest to the lowest point. To produce joints impermeable to water, the joint mortar must afterwards be compacted (e.g. with a jointing iron or a tamper); this is essential.

Brushing off / cleaning:
Immediately **clean the excess mortar off with a water spray**, without washing out the joints. Make sure that cleaning is carried out towards areas that have not yet been jointed and that the stone surface is cleaned as well. Sweep off the last mortar residues once more with a **damp** coconut fibre brush.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off the freshly jointed area for a period of at least 24 hours, or until the paved surface is no longer tacky. The areas can then be walked on. Final release of the areas to traffic after 3 – 5 days at the earliest. In principle a strength test should be carried out before the areas are put into service.

Important Notes

Substrate
vdw 855 Jointing Mortar high-compaction is a jointing material and cannot absorb settlement from the substrate. Substrate, sub-base and surfacing must be designed to suit the anticipated traffic load.

Bedding
• **Pedestrian loading:** laying the setts in a stable, free-draining sand or chipping bed is sufficient. Better: lay the slabs in a free-draining concrete or mortar bed; we recommend **vdw 480 Bedding Compound** or **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**, as increased cracking may otherwise occur.
• **Vehicle loading:** the setts must be laid in a free-draining concrete or mortar bed – we recommend **vdw 490 Universal Trass Drain Mortar** and **vdw 495 Universal Adhesive Slurry**.

Joints
• **Minimum joint depth:** The minimum joint depth for **vdw 855 Jointing Mortar high-compaction** is the full block height.
• **Minimum joint width:** The minimum joint width for **vdw 855 Jointing Mortar high-compaction** is 8 mm.
• Chamfers on slab and clinker paving must be exposed, as sufficient adhesion is not ensured.
• Movement joints must be arranged in accordance with the construction principles. Joints from the substrate and at abutments to structures must be carried through. Joint with a suitable elastic joint material.
• Joints made impermeable to water do not count as watertight joints, nor do they replace a waterproofing layer.

Further application examples



vdw 855 is particularly suitable where loading is high, e.g. from delivery traffic or cleaning machines.



Because natural mineral aggregates are used, the vdw 2K jointing mortars blend harmoniously into historic townscapes.

vdw VarioSand

Innovative jointing solution for unbound construction

Where jointing mortar can no longer be used, the field of application of **vdw VarioSand** begins.
The cohesive jointing sand inhibits weed growth and is ideally suited to driveways and footpaths.

- Ideal for concrete block paving and clinker paving with narrow joints.
- Special jointing sand of the latest generation.
- Low-dust application.
- Suitable for paved areas in private and public spaces with normal traffic loads.



joint width ≥ 2 – 4 mm

- natural



- basalt grey

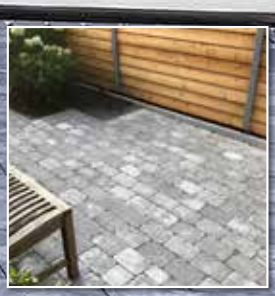












Further properties

• Stable joint filling	➡ prevents the joints from sanding out
• Solid joint filling	➡ suitable for trafficked areas in an unbound paved surface
• Special hybrid binders	➡ low-dust application
• fine sand structure	➡ for narrow joints from 2 – 4 mm
• weed-inhibiting	➡ clean paved surfaces
• water permeable	➡ suitable for paved areas in private and public spaces
• ready to use	➡ no mixing required

Important Notes

As a general rule: permanent wetness in the joint can damage the product. vdw VarioSand is also not resistant to high-pressure cleaners or mechanical sweepers!

If the water contained in the jointing sand evaporates only slowly during the setting phase because of the weather, or if the temperature drops below the dew point at night, the jointing sand cannot dry out and therefore cannot set properly. In this case the cordon-off and rain protection times must be extended accordingly.

On existing areas the stone surface may have been roughened by weathering, use and cleaning, so that it may not be possible to remove the jointing sand without residues. Even with correct application a haze can remain. The same applies to new installations with open-pored concrete blocks or clinker paving. In these cases we recommend a pre-treatment with **vdw 950 StoneProtect plus 3 in 1**.

Technical Data

Composition:
Aggregates to DIN EN 13139

Binder:	special polymers, additives, cement
Joint width:	continuously min. 2 mm, max. 4 mm
Joint depth:	min. 40 mm, full paver height on trafficked areas
Packaging:	25 kg bag, pallet of 40 – 1000 kg

Material data

Density:	approx. 1.5 – 1.7 kg / litre when compacted
Water permeability:	permeable to water
Storage life:	24 months when stored dry and frost-free

Ecology

Disposal:	as construction rubble
Waste code:	AVV 1701

Consumption

Per litre of joint volume:	approx. 1.5 - 1.7 kg vdw VarioSand
Guide values	Concrete paving: approx. 3-4 kg / m², 40 mm joint depth

This product is not suitable for slab paving! (> 30 cm edge length)

An online calculator for the material requirement can be found at
www.gftk-info.de/Verbrauchsrechner

Application

You will find further information in this application video



Brush in vdw VarioSand and sweep it off the surface



Vibrate the material in.



Then top up with sand and vibrate again. Afterwards sweep off without residue and expose the chamfers if necessary



Water the area sufficiently. Observe the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate. Joint depth ≥ 40 mm, full paver height on areas with vehicle traffic, joint width continuously min. 2 mm – max. 4 mm, outside and surface temperature min. 8 °C, max. 30 °C, frost-free period after installation min. 2 days!

Test area:
On concrete block paving, contact between **vdw VarioSand** and the stone surface may cause visual changes such as haze or discolouration. We generally recommend applying a test area.

Tools & equipment:
- Coconut fibre brush
- Rubber squeegee
- Simplex hammer / large rubber mallet – e.g. for edge zones that cannot be vibrated
- Water hose with an adjustable nozzle, sponge or sponge float if required
- New-build areas only: “large” vibrating plate, with a protective mat depending on the paving, otherwise “small” vibrating plate – approx. 60 – 80 kg to compact the jointing material, with a protective mat depending on the paving material

Preparation:
Clean the paved surface free of residues and dry it. The stone surface and the joint flanks must be completely dry, because moisture activates the binder in the product, which can lead to soiling of the stone surface. If necessary, dry off residual moisture with a gas burner or similar.

Installation:
Brush the material in dry until the joints are completely filled. Sweep the area off and compact it thoroughly with a small vibrating plate (60–80 kg) fitted with a protective mat, with a roller compactor or, on small areas, with a rubber mallet. Carry out this step very carefully in order to produce a stable and durable joint. Repeat the operation until the required filling height is reached. **Check the compaction: press with a finger, the material must no longer give way.**
Fill the joints to max. 2 mm below the top edge of the paving. Then sweep the stone surface free of residues with a soft, clean and dry brush. The chamfers of the paving must be exposed while doing so. A leaf blower is ideal for careful, easy cleaning and for exposing the chamfers.

Activating the binder:
Spray the area evenly and generously with a soft jet of clean water (adjustable nozzle), working in small sections and starting at the lowest point. Repeat the operation approx. 4-5 times (more often with wider joints) until the jointing material is saturated with water over its full filling depth. Do not wash the jointing material out of the joint and avoid foaming of the binder caused by a jet that is too hard or held too close. Do not let the area dry out while it is being watered. **Test: lift the jointing material at several points, e.g. with a spatula or a screwdriver, and check that it is completely soaked through.** Do not flood the area and avoid puddles; remove standing water with a sponge or a rubber squeegee.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed). The jointing sand must dry through completely in order to set properly. Application in dry, sunny weather is therefore recommended. Protect the area from rain for 3 hours. At low temperatures extend the rain protection! Afterwards remove the rain protection immediately. Likewise, do not cover the area in dry weather, so that the joint can dry through.

The finished, set joint must not be driven or walked on directly. After 3 hours the area can be walked on. It can be driven on after approx. 3 days. Final release to traffic after 5 days.

Further application examples









Complementary products

A system is only as good as its individual components.

vdw Mortar Systems means more than a matching range of bedding and jointing mortars. We also offer a wide variety of products that complete construction systems, make alternative designs possible or provide special solutions for particular situations. On the following pages we present further vdw products that supplement and complete the “Mortar Systems” range.



vdw 950 StoneProtect plus 3 in 1

(see page 100)

vdw Cleaning Wipes

(see page 102)





vdw Smoothing Agent for vdw 885 plus – FugenFlex

(see page 98)





vdw 520 – EP Aggregate Binder

(see page 88)



(see page 91)

vdw 870 – Paving Joint Sand Stabiliser



vdw 885 plus – FugenFlex

(see page 94)



vdw 520 – EP Aggregate Binder

Can be used for tree pit surfacing, paving and slab borders, area surfacing, lawn edges and splash protection strips



for light traffic loads



highly water permeable



for wide edge joints

Further properties

• solid surfaces without joints	➡ Closed surfaces with no loose fill – easy to maintain, safe and visually high-quality
• water- and air-permeable paved areas	➡ no falls required, allows natural infiltration and improves the microclimate
• sound-absorbing	➡ Reduces impact sound – ideal for residential surroundings and urban spaces
• frost-resistant	➡ Lasting stability even at winter temperatures – no damage from freeze-thaw cycles
• colourfast	➡ Ideal for coloured, natural mineral aggregates
• also suitable for damp mineral aggregates	➡ Easy application even with residual moisture – no need to dry before application

Technical Data

Product description
Binder for producing a water permeable aggregate mortar.

Binder:	two-component, solvent-free epoxy resin binder with special additives

Material data

Density:	1.15 g/cm³
Storage life:	1 year

Ecology

Disposal code:	Component A: 080410, 080499 Component B: 080409, 080413, 080499

Application data

Mixing ratio:	A:B = 100:60
Pot life:	approx. 40 minutes at 20 °C
Outside temperature:	min. 8 – max. 30 °C
Substrate temperature:	min. 8 – max. 30 °C

Important Notes

General information

• Owing to the nature of the system, the temporary appearance after installation (gloss effect and colour deepening) weathers away over time (how long depends on the intensity of the UV radiation). For this reason the effect can be uneven, particularly on larger areas, and can persist considerably longer or irreversibly in roofed-over areas.

• On bright white mineral aggregates a slight, temporary yellowing of the colour can occur. These effects result from the contact between vdw 520 EP Aggregate Binder and the mineral aggregate and are not a workmanship defect.

• When laying larger areas made up of several mixing batches, particular care must be taken to keep the mixing and ambient conditions uniform, in order to ensure an even and homogeneous appearance.

• We therefore recommend applying a test area.

• All times in this data sheet refer to 20 °C and 65 % relative humidity (high temperatures shorten these times, low temperatures lengthen them).

• Surfaces produced with vdw 520 generally need no movement joints. For technical reasons, however, it is advisable to create predetermined breaking points so that cracking is controlled. Cutting with a diamond blade at intervals of approx. 6.00 – 8.00 m has proved best.

• Despite careful application, marginal detachment of individual grains cannot be entirely ruled out; it is not a product or workmanship defect.

Packaging

Pack size	Art. no.
1.25 kg PE combi pack	520 102 812
5 kg PE combi pack	520 102 820
300 kg drum	520 102 830

Application

You will find further information in this application video



Clean the surface, add binder to the mineral components



Mix intensively



Apply the aggregate mortar



Screed off over rails



Compact and smooth



follow the curing notes!

vdw 520 EP Aggregate Binder is suitable for producing an aggregate mortar with **dust-free** mineral aggregates (chippings, rounded grain, cubic grain) in the grain sizes 1/3 mm, 2/4 mm, 2/5 mm, 5/8 mm, 8/11 mm and 8/16 mm. Depending on the grain size, the contents of one unit (1.25 kg) will bind between 25 kg and 40 kg of mineral aggregate. **The material requirement can conveniently be established with the consumption calculator (www.gftk-info.de/Verbrauchsrechner).**

Areas of use and construction notes:
For pedestrian loading on an unbound base course to DIN 18315, in a layer thickness of at least 4 cm. For pedestrian loading on a bound bedding or base course to DIN 18316, in a layer thickness of at least 3 cm. For car traffic only on a bound, free-draining base or bedding course to DIN 18316, in a layer thickness of at least 5 cm. We recommend **vdw 480 Bedding Compound** or **vdw 470 Landscaping Drain Mortar/vdw 490 Trass Drain Mortar**. On areas with car traffic the largest grain of the mineral aggregate must not exceed 5 mm (e.g. gradings such as 1–3 mm, 2-4 mm or 2–5 mm). Irrespective of the minimum thicknesses given above, the layer thickness must be at least three times the diameter of the largest grain of the mineral aggregate. The substrate must be dimensioned to suit the anticipated loads. The planned level, fall and evenness must be assured. Existing contamination must be removed without residues.

Preparation:
Clean the surface, the joint flanks and the mineral aggregate free of residues. Adjacent areas such as kerbs or slabs must be protected against contamination by the binder by covering and masking them.

Test area:
On natural stone and concrete block paving, contact between **vdw 520 EP Aggregate Binder** and the stone surface may cause visual changes such as darkening and/or spotting, which may also be irreversible. **Always apply a test area!**

Material preparation:
Mix the binder components intensively **strictly in the order: mineral aggregate, comp. A and comp. B, one after the other.** Then transfer the mixed material into a clean container and mix it through again. **Do not add water!**
A few types of limestone and chalky chippings have a high dust content. Such chippings must be washed intensively before mixing and then dried, in order to avoid a loss of strength. The mineral aggregates used (chippings and gravels) may be matt damp but must not be wet.

Application:
Place the prepared **aggregate mortar** on the base course. Spread it with a shovel and screed it off level to the appropriate thickness over rails. Compact and smooth the surface.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Cordon off and protect the freshly laid areas from moisture (e.g. rain, dew or frost) for a period of at least 24 hours. The areas can then be walked on. Final release of the area to traffic can take place after 7 days. In principle a strength test should be carried out before the area is put into service.

vdw 870 – Paving Joint Sand Stabiliser

For stabilising sand joints in natural stone paving, concrete block paving, slabs and clinker paving, for garden paths, house entrances and terraces. Outstandingly suitable for repairing cracks in paving joints.



for pedestrian traffic



permeable to water



joint width ≥ 1 mm ≤ 5 mm

Further properties

- fast, cost-effective stabilisation
- resistant to sweeping and rain
- clean paved surfaces
- water permeable
- temperature-resistant

Technical Data

Product description
Binder for stabilising sand joints in paved areas.

Binder:	one-component, aqueous, low-viscosity acrylic dispersion.
Joint width:	1 to 5 mm
Joint depth:	at least 10 mm
Packaging:	1 litre PE bottle, 5 litre PE canister, 200 litre drum

Material data

Viscosity:	approx. 120 mPas
Solid content:	approx. 15 %
Storage life:	6 months, stored dry and frost-free

Application data

Application temperature:	min. + 10 °C

Product safety

Product safety data:	not subject to mandatory labelling

Ecology

Water hazard class:	WGK 1 (self-classification)
Disposal:	Waste code 080410, 080499

Application notes

Consumption
approx. 1 – 2 l/m²
Depends on joint width, joint depth and degree of saturation, on the grain size of the mineral aggregate and on the proportion of joints. The consumption must be established by applying a test area.

Substrate
• The substrate must be permanently load-bearing and free-draining and must suit the anticipated loads.

Bedding
• Lay paving or slabs in a sand or chipping bed

Joints
• Minimum joint depth: 10 mm
• Joint width: 1 to 5 mm
• Movement joints must be arranged in accordance with the construction principles.
Joints from the substrate and joints adjoining structures must be carried through.

Preparation
When **vdw 870 Paving Joint Sand Stabiliser** is applied, gloss develops and the colour of the substrate is visually deepened. A preliminary test must always be carried out (especially on absorbent natural stone or concrete blocks). **vdw 870 Paving Joint Sand Stabiliser** makes the sand joints resistant to sweeping and rain only.
• Chamfers on concrete block and clinker paving must be swept free, as sufficient adhesion is not ensured.
• The one-component **vdw 870 Paving Joint Sand Stabiliser** is ready to use.
• If water separates on the surface after prolonged storage, homogenise the dispersion by shaking or stirring.

Application

You will find further information in this application video



Clean surfaces free of residues



Fill the joints with quartz sand ...



... fill completely



Saturate the joints with vdw 870



Remove the excess



Pick up residues with a damp sponge



follow the curing notes!

Requirements:
A stable, load-bearing, permanently water permeable substrate, joint depth ≥ 10 mm, joint width 1 to 5 mm, surface and outside temperature ≥ 10 °C, max. 30 °C.

Test area:
With some paving materials, contact between **vdw 870 Paving Joint Sand Stabiliser** and the stone surface may cause visual changes such as darkening and/or spotting. We generally recommend applying a **test area**.
On absorbent paving we recommend using **vdw 950 StoneProtect plus 3 in 1**.

Preparation:
Clean the surface of the object to be stabilised free of residues. Contamination is fixed in place by the binder.

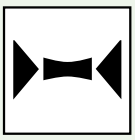
Stabilising the joints:
Saturate joints filled with quartz sand (grain size 0.3 – 0.8 mm) with the joint stabiliser.

Finishing:
Remove excess joint stabiliser immediately with a hard rubber squeegee and a coconut fibre brush. Pick up the residues with a damp sponge.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed). Cordon off the freshly stabilised areas for a period of at least 24 hours, or until the paving surface is no longer tacky. The areas can then be walked on. Protect the freshly jointed areas from moisture for a period of at least 24 hours (do not lay sheeting directly on the paving, provide ventilation underneath). Final release of the areas to traffic after 3 – 5 days. In principle a strength test should be carried out before the areas are put into service.

vdw 885 plus – FugenFlex

Highly elastic joint filler for movement, connection and paving joints with excellent resistance to weathering, UV and ageing



highly elastic



joint width ≥ 4 mm
≤ 20 mm



also for vertical joints



matt and textured colour



suitable for full-surface jointing



suitable for pedestals

- natural



- stone grey



- basalt





Ideal for pool coping slabs

Also ideal for slabs laid on pedestal supports!

Further properties

- ✔ Suitable for natural stone, concrete and (composite) ceramic paving
- ✔ Recommended as area joints for large formats
- ✔ Also suitable for jointing slabs laid on pedestal supports!
- ✔ Clean joint closure even with slabs laid unbound
- ✔ Can be used indoors and outdoors
- ✔ Matt appearance with a textured colour
- ✔ Dual product: - as joint sealant for movement joints
  - as joint filler for large-format slabs

Technical Data

Technical Data:

System:	alkoxy-based
Density DIN 53479-B at 23 °C:	approx. 1.4 g/cm³
Shore A hardness DIN EN ISO 868:	approx. 30
Practical movement capability:	25%
Application temperature:	+5 °C to +35 °C
Temperature resistance:	-40 °C to 120 °C
Skin formation time at 23 °C, 50 % RH:	approx. 10 minutes
Curing at 23 °C, 50 % RH:	approx. 2 mm per 24 hours

Storage life:	12 months, stored dry and frost-free

Ecology:

Water hazard class:	Class 1
Disposal code:	080400, 080410, 070200, 070217, 150100, 150102

Important Notes

• Check material compatibility! Before use, make sure that all materials in the contact area are compatible with one another and do not change or discolour.

• On coated substrates (e.g. lacquers, paints) compatibility with the product must be confirmed by preliminary tests.

- To avoid staining, do not apply primer to visible surfaces.
- Avoid contact with materials containing bitumen or plasticisers (e.g. butyl, EPDM, neoprene, black coatings).

• The joint width must be dimensioned so that the permissible total deformation of the sealant caused by movement of the adjoining components is not exceeded.

- Three-sided adhesion must be avoided.
- vdw 885 plus FugenFlex is not suitable for full-surface bonding.
- Remove excess smoothing agent wherever possible to avoid staining.

• If vdw 885 plus FugenFlex is subject to special chemical or mechanical loads, the joint must be defined as a maintenance joint.

• vdw 885 plus FugenFlex is suitable for use on privately used paved areas such as terraces, house entrances and private garage driveways.

Packaging

Colour	Pack size	Art. no.
natural	310 ml cartridge	885301810
stone grey	310 ml cartridge	885302810
basalt	310 ml cartridge	885303810

Use as a joint sealant for forming movement joints



Products for
Movement joints



vdw 884 FugenBand set into the bedding mortar



Lay the adjoining paving without pressure



vdw 884 FugenBand cut back 10 mm deep



Notch the cut edge of the FugenBand to do so



Remove all remnants of the joint tape



Mask the edges cleanly and **vdw 885 plus FugenFlex** inject under pressure, bubble-free



Compact the sealant and strike it off



Remove the adhesive tapes immediately afterwards



apply **vdw 886 Abstreusand** if required



Press the broadcast sand in lightly



follow the curing notes!

Requirements for permanently elastic jointing:
The joint flanks must be clean, free of dust, oil and grease, and sound. Where necessary, clean the surfaces and joint flanks free of any residues of substances that can act as release agents.

Depending on the type of paving, prime with **vdw Primer** (observe the flash-off time).

The ratio of joint width to joint depth must be taken into account. Avoid moisture, frost and dew on the joint flanks; stable substrate.

Joint width: 4 mm – 20 mm
Joint depth: 1:1 to 1:2 of the joint width
Surface temperature: min. 5 °C, max. 30 °C.

Application:
vdw 884 FugenBand is set into the bedding mortar and the paving is then laid without pressure. In the joint, cut the FugenBand back to the joint depth of **vdw 885 plus FugenFlex**. To do so, notch the cut edge of the FugenBand and remove it without leaving residues.

Where necessary, and depending on the edge profile, the edges are masked with adhesive tape.

Inject **vdw 885 plus FugenFlex** evenly into the open joint under pressure.

The joints must be filled completely and without air pockets. Smooth the surface immediately with **vdw Smoothing Agent** and a spatula, a smoothing float or similar.

Pull off the adhesive tape immediately afterwards and, if necessary, work over the joint once more.

Immediately afterwards **vdw 885 plus FugenFlex** can be blinded with **vdw 886 Abstreusand**, which matches the appearance of the movement joint to the colour of the surrounding joints.

Curing:
The following points refer to a temperature of 23 °C and 50 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed).

Cordon off the freshly applied joints for a period of at least 24 hours.

The areas can then be walked on. Final release of the areas to traffic after 7 days.

In principle a strength test should be carried out before the areas are put into service.

Application as a paving joint

Requirements for the elastic jointing of paving joints:
In unbound construction the slabs must be laid stably and securely. The joint flanks must be clean, free of dust, oil and grease, and sound. On absorbent paving, prime the joint flanks with vdw Primer (observe the flash-off time). Fix the required joint depth with a vdw backing rod. Mask the adjacent surfaces (as a rule not necessary with ceramic terrace elements). The ratio of joint depth to joint width must be observed. No moisture, frost or dew on the joint flanks. Joint width ≥ 4 mm, max. 10 mm; joint depth ≥ 10 mm, surface temperature ≥ 5 °C, max. 35 °C.

Application:
Protect edge units and adjoining components against soiling with adhesive tape. Where necessary, and depending on the edge profile, the edges can be masked with adhesive tape. Inject vdw 885 plus FugenFlex evenly into the open joint under pressure. The joints must be filled completely and without air pockets. Then work over and smooth the surface with vdw Glättmittel smoothing agent and suitable smoothing tools.

Curing:
The following points refer to a temperature of 23 °C and 50 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time and the time for which rain protection is needed). Cordon off the freshly applied joints for a period of at least 24 hours. The areas can then be walked on. Final release of the areas to traffic after 7 days. In principle a strength test should be carried out before the areas are put into service.



Application on pedestals


roll in vdw backing rod


apply vdw 885 plus


apply vdw Smoothing Agent


strike off the excess

Application:
Protect edge units and adjoining components against soiling with adhesive tape. Where necessary, and depending on the edge profile, the edges can be masked with adhesive tape. Fix the required joint depth with a PE backing rod. Inject vdw 885 plus FugenFlex evenly into the open joint under pressure. The joints must be filled completely and without air pockets. Then work over and smooth the surface with vdw Smoothing Agent and suitable smoothing tools.

follow the curing notes!

vdw Smoothing Agent for vdw 885 plus – FugenFlex

Important Notes

Fields of application
Water-based solution for smoothing sealants.
Suitable for use on natural stone.

CAUTION: on very sensitive natural stones (e.g. Nero Impala or Nero Assoluto), the use of vdw 885 plus FugenFlex smoothing agent can cause stains or discolouration that cannot be removed with normal cleaning agents. As a rule the vdw 885 plus joint should only be struck off once. The more often the surface is worked over with smoothing agent, the more the matt effect is lost and the glossier the joint becomes.
Always lay a test area before use!

Storage life: 12 months from manufacture if stored dry and frost-free

Application


apply vdw 885 plus


apply vdw Smoothing Agent


strike off the excess

Properties

- ✔ Water-based solution of surface-active substances
- ✔ Specially matched to sensitive marble and natural stone types
- ✔ Reduces the risk of smoothing-agent staining to a minimum
- ✔ Colour pigments of the sealant are not washed out
- ✔ Dermatologically tested ingredients
- ✔ Use undiluted only

Advantages over washing-up liquid





- **Clean surface – no residues**

  Household washing-up liquids contain fragrances, colourants and additives. These remain on the sealant surface, making it dull, sticky and prone to soiling. The appearance of the joint quickly loses quality and looks.



- **Adhesion is maintained**

  Washing-up liquid acts as a release agent between the joint and the adjoining components. Adhesion is impaired as a result – edge detachment, leaks and premature damage are possible.



- **Natural stone stays flawless**

  Residues of unsuitable smoothing agents can penetrate the edge zones of sensitive stones.
  - Dark damp edges show up as light, water-repellent margins when wet – an indication of water repellency.
  - Residues of washing-up liquid can remain visible as white marks on the sealant surface.
  - These marks can transfer to the natural stone surface

  and can no longer be removed.



- **No foreign substances, no side effects**

  Household washing-up liquids are not designed for construction applications. The substances they contain (e.g. refatting ingredients) can attack the sealant surface and impair adhesion.



- **vdw Smoothing Agent – the safe alternative**
  - Specially matched to vdw 885 plus FugenFlex
  - Ensures clean, elastic and firmly bonded joints
  - Free from residues or discolouration
  - Material-compatible even with sensitive natural stone

Recommendation:

For striking off and smoothing joint sealants, use vdw Smoothing Agent exclusively – optimally matched, compatible with natural stone and safe to use.

vdw 950 StoneProtect plus 3 in 1

Ready-to-use, water-based special impregnation for making natural stone and mineral, absorbent surfaces water- and oil-repellent. Reduces the binder film during the subsequent jointing of critical substrates with resin-bound paving joint mortars.







Further properties

- jointing aid for subsequent resin jointing
- for natural and concrete stones
- reduces water absorption
- reduces staining
- oil-repellent
- vapour-permeable
- solvent-free
- quick drying

Important Notes

Characteristics:
vdw 950 StoneProtect plus 3 in 1 can be used on many natural and concrete stones. It reduces the absorbency of the treated paving and largely prevents water, oil and grease from penetrating it. Soiling therefore remains on the surface and the areas are easier to clean. The colour of the treated paving is not changed, or only slightly. Certain substrates can look darker after treatment with **vdw 950 StoneProtect plus 3 in 1**. **We recommend laying a test area**. vdw 950 StoneProtect plus 3 in 1 may only be used on areas that are already jointed once any binder film present has weathered away completely. With cement-based jointing, after 7 days at the earliest.

Requirements:
Clean, dry, dust-free, absorbent and load-bearing surface. Ambient and surface temperature > 10 °C, max. 25 °C, dry weather.

Consumption:
approx. 100 to 150 ml / m² (consumption depends on the absorbency of the substrate and should, in case of doubt, be determined by laying a test area.)

Application:
The areas to be treated must be completely dry, clean and free of soiling. Apply **vdw 950 StoneProtect plus 3 in 1** generously and evenly with a suitable brush, sponge or pressure sprayer. **Avoid puddles and drips.** We recommend first decanting **vdw 950 StoneProtect plus 3 in 1** into a suitable container and applying the material with a sponge. On slab paving it is advisable to work slab by slab, or row by row. Take up any product left over. This is particularly important on substrates with uneven absorbency, as staining can otherwise occur. Avoid splashes on adjacent materials, or wipe them off immediately with a damp cloth. This method of working gives an economical and clean application of **vdw 950 StoneProtect plus 3 in 1**.

Curing:
For at least 5 hours after application (at 20 °C and 65 % relative humidity) the area treated with **vdw 950 StoneProtect plus 3 in 1** must be protected from moisture and soiling. After that, or once it has dried completely, the treated substrates can be jointed with **vdw Jointing Mortar**.

Technical Data:

pH value:	approx. 5
Odour:	almost odourless
Appearance:	transparent, slightly yellowish
Foot traffic:	after approx. 3 hours at 20 °C and 65 % relative humidity
Ready for jointing:	after approx. 5 hours at 20 °C and 65 % relative humidity
Full effect:	after approx. 24 hours at 20 °C and 65 % relative humidity
Duration of effect:	up to 2 years (depending on the type of surface and the loading)
Storage:	12 months if stored dry, cool and frost-free in the sealed original container

Packaging:
1 l bottle Art. no.: 950 001 801
5 l canister Art. no.: 950 001 805

Product safety data:
Composition: high-performance polymers, additives, water

vdw Cleaning Wipes

Moist special cleaning wipes for removing synthetic resin and adhesive residues from non-absorbent paved surfaces and other smooth surfaces. Also excellently suited for the final construction cleaning of paved and slab surfaces jointed with synthetic resin



Further properties

- Also suitable for cleaning tools and equipment.
- Extremely tough, soft, low-lint wipe with a textile feel
- Impregnated with a gentle cleaning substance

vdw Cleaning Wipes



- Easy wipe removal via the tear-off perforation in the reclosable dispenser bucket
- Particularly kind to the skin thanks to vitamin E and aloe vera, with a pleasant fresh fragrance
- Also suitable for cleaning tools
- Dissolves grease, lubricants, adhesive, tar, asphalt, ink, wax, coal and grass stains, among others

Material type:	Wipes (70% viscose, 30% polyester, impregnated with a gentle cleaning substance)
Storage:	Store in a cool place, but protect from frost.
	Close opened containers tightly
Storage life:	approx. 24 months in the closed container
Disposal:	Contents / container in accordance with local / regional / national / international regulations
Size:	25 x 25 cm per wipe
Packaging:	72 wipes in a dispenser bucket
Packaging unit:	6 buckets per box
Art. no.:	796 001 996
EAN:	4049617960006

Application examples









Traffic surface coating

COLOROUT – Traffic Surface Coating

Gesellschaft für technische Kunststoffe has been developing and producing innovative products for road construction since 1985. With the market launch of our first paving joint mortar we proved that water-permeable epoxy resin jointing mortars can revolutionise a market.

Since then the name GftK – Gesellschaft für technische Kunststoffe has stood for high-quality, innovative, fast, environmentally friendly and durable solutions for the industry.

With the development of COLOROUT – the coloured traffic surface coating with "built-in skid resistance" – we have been offering a system solution for the durable coating of traffic surfaces since 1991, one that makes a substantial contribution to the safety of road users.

To date COLOROUT has proved itself on several tens of thousands of square metres of traffic surfaces.

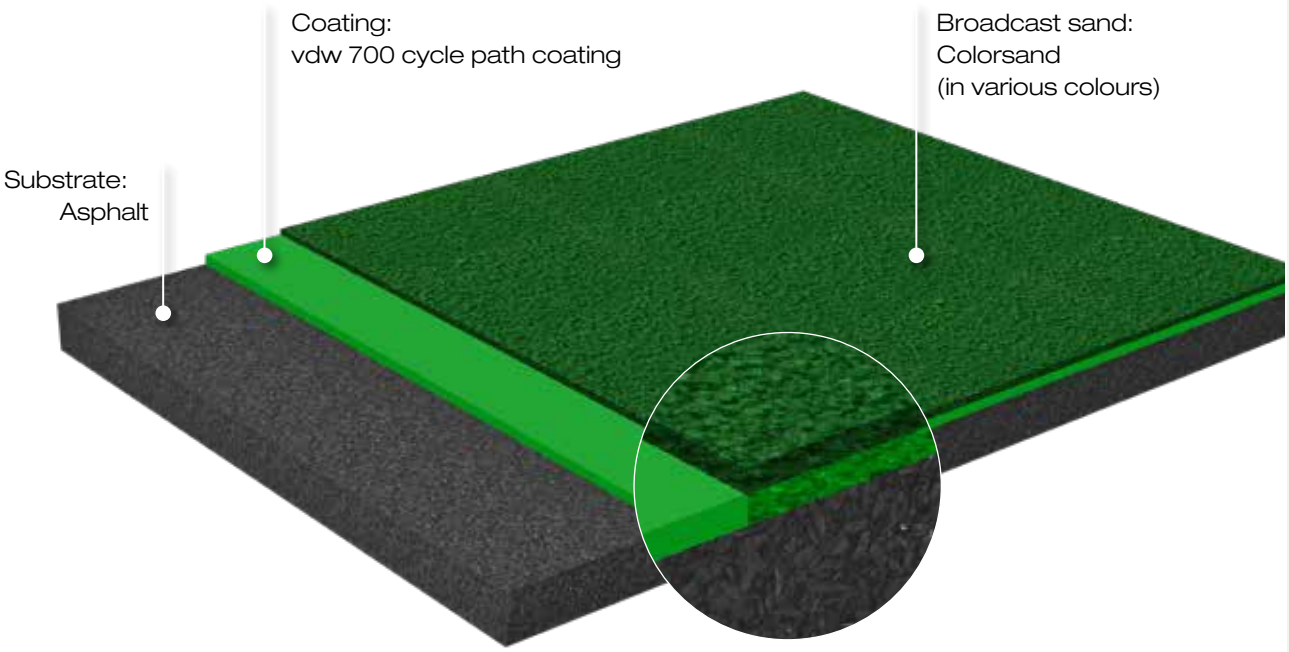






An attractive appearance, optimal performance in use and economic aspects all matter. This calls for highly efficient coating systems such as the **vdw 700** systems.

The COLOROUT system



The GftK cycle path coating system is based on the flexible epoxy resin coating vdw 700, which is available in various colours. Combined with matching coloured quartz sands, the desired colour of the road surface can be selected. The sands can be supplied in RAL colours.

Just as with reinforced concrete, our coating system creates a composite material that combines the best properties of the materials used.
The binder serves as a flexible fixing for the wear-resistant broadcast sand. The result is a flexible yet mechanically highly loadable cycle path coating.

The vdw cycle path coating is distinguished by the fact that the load is transferred through the broadcast quartz sand directly into the asphalt surface.

This is the decisive advantage over conventional coating systems and guarantees a considerably longer product service life!



Benefits of the GftK cycle path coating

What makes the vdw cycle path coating better than conventional systems?

We asked ourselves what really matters and rethought what already exists. Our system fits the cycling concept of the future.

We combine sustainability, quality and safety in one product!



Safety

Durability

The GftK cycle path system consists of a high-quality flexible epoxy resin coating that achieves its skid resistance through broadcast natural quartz sand. The quartz sand penetrates the coating down to the asphalt and is supported by it. This makes the coating up to 5 times more durable than conventional cold plastic systems. That not only saves resources, it is also a clear cost saving for towns and municipalities.

Design and surface styling

Thanks to the “broadcast principle”, the design possibilities are extremely varied. It is worth thinking beyond the classic red cycle lane. Paths in parks finished with natural granite chippings are barely distinguishable from water-bound surfaces – but they are considerably cheaper to maintain and clean.

Skid resistance

Even in the standard version we clearly exceed the required SRT 55 value. Thanks to the extremely long service life, this value can still be guaranteed long after handover.

Safety

The structural separation and colour marking of cycling areas helps prevent accidents between cycle, pedestrian and motor traffic. Cyclists demonstrably feel subjectively safer on cycle paths that are set off in colour. That helps to strengthen cycling.



Sustainability

Resource-saving

Thanks to the long product service life, follow-up costs are lower than with conventional coatings. Traffic surfaces built with the GftK cycle path system are easy to recycle.

Microplastics

The principle of wear-resistant quartz sand and flexible epoxy resin gives the coating system a long service life. This clearly reduces the emission of microplastics found with cold plastics and underlines the sustainability of our coating system.

Mobility transition

We are part of the mobility transition! The GftK cycle path system is sustainable, safe and of high quality. It promotes safe and comfortable cycling and thus contributes to climate protection.

Microclimate and urban living space

Reducing dark traffic surfaces means the surfacing heats up less. That benefits above all the microclimate in urban living spaces!

vdw 700 – Surface Coating

COLOROUT

For asphalt and hydraulically bound substrates
For cycle paths, footpaths, turning lanes, crossings and surface design.

- coloured
- slip-resistant
- highly wear-resistant
- emission-free



for light to medium traffic loads

References





For greater safety – Berlin Neukölln & Treptow-Köpenick
several 10,000 m ^{2}of green cycle paths – in hazard zones the cycle path is finished in red



Urban design solutions – Zurich (Switzerland)
vdw 700 transparent with granite chippings replaces coloured asphalt





Design of park areas – Olivaer Platz in Berlin
vdw 700 with 1–3 mm granite chippings creates the look of a water-bound path surface with much lower maintenance

Technical Data

Product description
Reaction-resin based, solvent-free coating material.

Binder:	2-component, solvent-free, flexibilised epoxy resin
Packaging:	5 and 10 kg metal tins

Material data

Viscosity:	5000 – 6000 mPas
E-Modulus:	200 N/mm²
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 45
Pot life:	approx. 10 minutes at 20 °C
Outside temperature:	≥ 15 °C
Substrate temperature:	≥ 15 °C (at least 3 °C above the dew point temperature)

Ecology

Water hazard class:	Component A:	Class 2
	Component B:	Class 3
Disposal code:	Component A:	080410, 080299, 080499
	Component B:	080410, 080499

Packaging

Colours	Pack size (metal tins)	Art. no.
transparent	5 kg	700 101 705
	10 kg	700 101 710
yellow	5 kg	700 111 705
	10 kg	700 111 710
green	5 kg	700 161 705
	10 kg	700 161 710
red	5 kg	700 132 705
	10 kg	700 132 710
blue	5 kg	700 151 705
	10 kg	700 151 710
grey	5 kg	700 174 705
	10 kg	700 174 710
black	5 kg	700 191 705
	10 kg	700 191 710

Ecology

Disposal:

- Containers emptied of residues (drip- and scraper-free) can be disposed of free of charge through our certified contract partner. Further information at contact@gftk-info.de.
- Unmixed material requires disposal as special waste. Mixed and fully cured material is inert and does not require special disposal.
- For product-related information please refer to the container label and the safety data sheets.

Application



Observe the substrate requirements



Prepare the substrate carefully



Mask off the area to be coated



Pour component B into component A and mix thoroughly



Apply all of the material and spread it with a rubber squeegee



Work over with a paint roller



Broadcast aggregate onto the fresh coating



follow the curing notes

Requirements:
Sufficient surface strength of the asphalt or concrete substrate. Suitable weather conditions, relative humidity ≤ 80 %, object temperature ≥ 15 °C and at least 3 °C above the prevailing dew point temperature.

Tools:
Drill and mixing paddle, rubber squeegee, paint roller, shovel and broom.

Preparation:
Clean the substrate carefully, mask off the area to be coated with adhesive tape.

Material preparation:
Pour the binder components together and mix them with a slow-running stirrer, mixing time at least 3 minutes.

Application:
Apply the binder to the area to be coated immediately. Spread it with a rubber squeegee. Work it over with a paint roller. Broadcast aggregate over the whole of the coated area immediately. Remove the masking tape.

Brushing off:
Once the coating has hardened, take up the excess broadcast aggregate.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time).
Once the coating has hardened, the excess broadcast aggregate must be removed and picked up by sweeping or vacuuming.
At 20 °C the hardening time until the area can be released to traffic is approx. 2.5 – 3 hours.
Freshly applied vdw traffic surface coatings must be protected from rain until they have cured.

Important Notes

Substrate

Certain minimum requirements apply to the substrate for the vdw traffic surface coating systems.

• Hydraulically and bitumen bound substrates must be clean and dry. Weak parts and contamination such as rubber abrasion, oil etc. must be removed by suitable pre-treatment methods.
• Hydraulically bound substrates must have a bond strength of ≥ 1.5 N/mm².
• Bitumen bound substrates must not contain any flux oils. New asphalt surfaces must have been under traffic for some time. Otherwise a pre-treatment is required to remove the binder or mortar film present on the surface.
• Suitable weather conditions, relative humidity ≤ 80 %, object temperature ≥ 15 °C and at least 3 °C above the prevailing dew point temperature.
• Existing road markings must be removed.

Substrate preparation

• If necessary, pre-treat the substrate by grinding, abrasive blasting or milling until the required surface strength is reached.
• Clean the substrate free of dust.
• Mask off the area to be coated with adhesive tape.

Material preparation

• Components A and B are mixed thoroughly, i.e. for at least 3 minutes, with a slow-running single-hand stirrer or drill. You will find stirrers and mixing paddles in our accessories range.
• Do not apply the material straight from the delivery container. After mixing, transfer it into a clean vessel and stir it through carefully once more.

Application

• On the prepared and cleaned substrate, mask off the area to be coated with adhesive tape.
• Press the adhesive tape down firmly.
• Apply the machine-mixed **vdw 700** surface coating to the masked-off substrate and spread it with a rubber squeegee.
• Work over the spread binder with a sheepskin roller to achieve good wetting of the substrate and to ensure that the binder is distributed evenly over it.
• Immediately after the coating has been applied, broadcast aggregate onto the surface in excess.
• Then remove the adhesive tape to prevent material sticking to it.

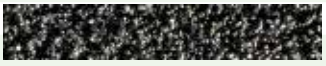
Consumption

• **vdw 700 Surface Coating**: approx. 1 kg/m² depending on the condition of the substrate; on a very rough surface consumption can be higher. On problematic substrates, e.g. with a high texture depth, we recommend laying a test area to determine the actual consumption.
• Aggregate: approx. 6 kg/m² depending on the aggregate used.

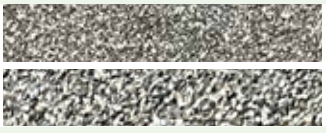
Aggregates

Product description:
High-quality coloured quartz sands with gradings of 0.7 – 1.2 mm and 1.0 – 1.8 mm, matched to the Colorout products. Polish-resistant hard aggregate with gradings of 1.0 – 2.0 mm and 1.0 – 3.0 mm for skid-resistant surfaces, matched to the Colorout products. Packaging: 25 kg bag (coloured quartz sands).

Quartz sands

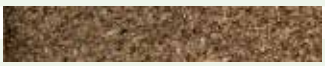
Colours		Grading	Pack size (bag)	Art. no.
natural		0,6–1,2 mm	25 kg	750 401 725
		1,0–2,5 mm	25 kg	750 601 725
yellow		0,7–1,2 mm	25 kg	751 411 725
		1,0–1,8 mm	25 kg	751 611 725
green		0,7–1,2 mm	25 kg	751 461 725
		1,0–1,8 mm	25 kg	751 661 725
red		0,7–1,2 mm	25 kg	751 432 725
		1,0–1,8 mm	25 kg	751 632 725
blue		0,7–1,2 mm	25 kg	751 451 725
		1,0–1,8 mm	25 kg	751 651 725
light grey		0,7–1,2 mm	25 kg	751 474 725
		1,0–1,8 mm	25 kg	751 674 725
black		0,7–1,2 mm	25 kg	751 491 725
		1,0–1,8 mm	25 kg	751 691 725

Natural stone

Granite		fine	25 kg	750 135 725
		coarse	25 kg	750 136 725
Rosé granite		fine	25 kg	750 132 725
		coarse	25 kg	750 137 725
Sahara granite		fine	25 kg	750 134 725
		coarse	25 kg	750 138 735
Polar grey granite		fine	25 kg	750 139 725
		coarse	25 kg	750 140 725
Crystal anthracite		fine	25 kg	750 141 725
		coarse	25 kg	750 142 725

Aggregates

Ceracollux® ceramic-coloured calcined flint

Colours		Grading	Pack size (bag)
dark blue		0,5–1,0 mm	25 kg
		1,0–2,5 mm	25 kg
brown		0,5–1,0 mm	25 kg
		1,0–2,5 mm	25 kg

Further colours on request, prices on request directly from Luxol.

Ceracollux® Sales and advice

Luxol A/S, Tangrimme 19, Kløv Kær, DK-7700 Thisted,
Tel.: +45 9799 5166, Fax: +45 9799 5115

Luxol A/S, Claus Carstensen,
Tel.: +45 6593 8966, Fax: +45 6593 8566

www.luxol.dk, CVR & SE no. 2942 4373

Sample specification

Manufacturer:

Gesellschaft für
technische Kunststoffe mbH
Kottenforstweg 3
D-53359 Rheinbach-Flerzheim
Tel.: +49 (0) 22 25 / 9157-0
mail@gftk-info.de
www.gftk-info.de

vdw 700 Surface Coating

Prepare the substrate. The substrate must be load-bearing, dry, free of dust and free of contamination. Produce clean edges with adhesive tape. Apply approx. 1 kg/m² of vdw 700 to the prepared substrate, spread it and roll it over. Then broadcast immediately with approx. 6 kg/m² of the corresponding aggregate or approx. 7 kg/m² of hard stone aggregate; the broadcast material is to be specified. The manufacturer's technical notes and application instructions must be observed.

Safety notes

Occupational safety:

- When working with **vdw 700 Surface Coating** avoid skin contact and wear safety goggles and safety gloves.
- Ensure adequate ventilation when working in closed areas.

Cleaning the tools:

- Clean the tools with cleaning agent (see accessories).

vdw 720 – Sealer

COLOROUT

For sealing indoor surfaces subject to light to medium traffic loads

For garages, storage halls and workshops.

- coloured
- economical, easy to apply sealing coat
- can be used on fresh concrete surfaces, with no need for conventional curing

- oxide red

- pebble grey

- dust grey

Technical Data

Product description
Reaction-resin based, solvent-free sealer.

Binder:	2-component, solvent-free, water emulsified epoxy resin
Packaging:	5 and 10 kg metal tins

Material data

Viscosity:	3000 – 4000 mPas
Solids content:	42 %
Water vapour permeability:	30 g/m ² (250 µm)
Storage life:	6 months, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 20 (transparent: A : B = 100 : 40)
Pot life:	approx. 60 minutes at 20 °C
Ambient temperature:	≥ 10 °C
Substrate temperature:	≥ 10 °C

Ecology

Water hazard class:	Component A:	Class 1
	Component B:	Class 2
Disposal code:	Component A:	080410, 080499
	Component B:	080409, 080413, 080499

Packaging

Colours	Pack size (metal tins)	Art. no.	Colours	Pack size (metal tins)	Art. no.
transparent	5 kg	720 101 705	pebble grey	5 kg	720 173 705
	10 kg	720 101 710		10 kg	720 173 710
oxide red	5 kg	720 132 705	dust grey	5 kg	700 175 705
	10 kg	720 132 710		10 kg	700 175 710

Safety notes

Health and safety:
- When using **vdw 720 Sealer** avoid contact with skin and wear safety goggles and protective gloves.
- Provide adequate ventilation when using in enclosed areas.

Cleaning of tools:
- Immediately after use with water; once partly cured, with cleaning agent (see accessories).

Application


Prepare the substrate


Mask off the area to be coated


Pour component B into component A and mix thoroughly


Apply the binder ...


... and spread with a roller


Apply the 2nd coat not before approx. 12 hours


follow the curing notes

Requirements:
Sufficient surface strength of the substrate, object temperature ≥ 10 °C.

Tools:
Drill and paddle mixer, paint roller.

Preparation:
Remove standing water, clean the substrate carefully, mask off the area to be sealed with adhesive tape.

Material preparation:
Mix the binder components with a slow-running stirrer, mixing time at least 3 minutes.

Application:
Apply the binder to the area to be sealed immediately, spread and work it in with a sheepskin roller; second coat after approx. 12 hours, depending on the temperature. Remove the tape immediately after each application.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Trafficked areas produced with **vdw 720 Sealer** can be walked on after 12 hours at 20 °C. Full mechanical and chemical load-bearing capacity is reached after 7 days at 20 °C and 65 % relative humidity.

Application notes

Substrate

- The substrate must be clean and free of loose and friable constituents.
- Contamination such as oil, grease or old paint must be removed by suitable pre-treatment methods.

Special features

- **vdw 720 Sealer** is used for sealing both fresh and hydrated hydraulically bound substrates (magnesite and anhydrite floors). The product is also particularly suitable for sealing green concrete, i.e. damp substrates.
- Seals produced with **vdw 720 Sealer** are permeable to water vapour. They adhere well to hydraulically bound substrates. They are largely resistant to dilute alkalis and acids as well as to mineral oils and fuels.
- **vdw 720 Sealer** is to be used on floors exposed to light to medium loads, such as warehouses, workshops and the like. Thanks to its good water vapour permeability, the product can also be used to seal floors in ground-contact areas without a moisture barrier.

Substrate preparation

- A fresh hydraulic substrate normally requires no pre-treatment, since contamination can be ruled out. The fresh, hydraulically bound floor must be able to take foot traffic.
- A hydrated, hydraulically bound substrate must be clean. Contamination such as dust, rubber abrasion or oil must be removed by suitable cleaning methods such as vacuuming, sweeping or steam jetting.

Material preparation

- Components A and B are mixed thoroughly, i.e. for at least 3 minutes, with a slow-running single-hand stirrer or drill. Stirrers and mixing paddles can be found in our accessories range.
- After mixing, up to a maximum of 10 % water may be added if required to adjust the consistency of the material (with pigmented products).
- Do not work straight from the delivery container. After mixing, decant into a clean vessel and stir thoroughly once more.
- Apply and spread the mixed material onto the area to be sealed immediately.

Application

- On the prepared and cleaned substrate, mask off the area to be coated with adhesive tape.
- Press the adhesive tape down firmly.
- Apply the machine-mixed **vdw 720 Sealer** to the masked-off substrate and spread it evenly.
- Work over the spread binder with a sheepskin roller to achieve good wetting of the substrate and to ensure that the binder is distributed evenly over the base.
- A second sealing coat at an interval of approx. 12 hours (20 °C) is absolutely essential.
- **CAUTION:** the end of the pot life cannot be detected! The maximum permissible working time of approx. 60 minutes at 20 °C must be observed.

Consumption

- **vdw 720 Sealer**: approx. 0.5 kg/m² per coat – at least two coats are necessary.

vdw 750 – Concrete & Asphalt CREATIVE

COLOROUT

For asphalt & concrete, for cycle paths, footpaths and surface design.

- versatile design
- natural surface
- slip-resistant
- long-lasting
- cost-effective



for light to medium traffic loads

Further properties

Durability:	Up to 5 times more durable than conventional cold plastic systems
Flexibility:	Ideal for asphalt, concrete, timber or metal – individually designable
Design:	Natural look and feel thanks to the natural stone surface
Safety:	Maximum skid resistance for maximum traffic safety

Technical Data

Product description
Reaction-resin based, solvent-free coating material.

Binder:	2-component, solvent-free, flexibilised epoxy resin
Packaging:	5 kg

Material data

Viscosity:	5500 mPas
E-Modulus:	200 N/mm²
Storage life:	1 year, stored dry and frost-free

Application data

Mixing ratio:	A : B = 100 : 50
Pot life:	approx. 20 minutes at 25 °C
Outside temperature:	≥ 15 °C
Substrate temperature:	≥ 15 °C (at least 3 °C above the dew point temperature)

Ecology

Water hazard class:	Component A:	Class 2
	Component B:	Class 3
Disposal code:	Component A:	080410, 080299, 080499
	Component B:	080410, 080499

Binder packaging

Colours	Pack size	Art. no.
grey	5 kg metal pail	750 001 705

Safety notes

Occupational safety:

- When using **vdw 750 Concrete & Asphalt CREATIVE** avoid contact with skin and wear safety glasses and protective gloves.
- There should be sufficient ventilation when working in enclosed spaces.

Cleaning the tools:

- Clean the tools with cleaning agent (see accessories).

Application



Observe the substrate requirements



prepare the substrate carefully



Mask off the area to be coated



Pour component B into component A and mix thoroughly



Either transfer the material into a large container and apply it, or spread it out on the surface first



roll the material out evenly with a paint roller and spread it.



broadcast the aggregate while still fresh



carefully remove the tape before hardening and follow the curing notes.

Requirements:
Sufficient surface strength of the asphalt or concrete substrate. Suitable weather conditions, relative humidity ≤ 80 %, object temperature ≥ 15 °C and at least 3 °C above the prevailing dew point temperature.

Tools:
Drill and mixing paddle, rubber squeegee, paint roller, shovel and broom.

Preparation:
Clean the substrate carefully, mask off the area to be coated with adhesive tape.

Material preparation:
Pour the binder components together and mix them with a slow-running stirrer, mixing time at least 3 minutes.

Application:
The binder should be spread from the mixing vessel onto the area to be coated, or transferred into a large container (e.g. a mortar tub), in order to avoid a build-up of reaction heat. The material can either be applied directly from the container with a roller or spread out over the area with a rubber squeegee. The area is then rolled over with a paint roller to achieve a defined application rate and to improve penetration into the substrate. Care must be taken to apply the coating material evenly, so that a uniform result is obtained. The freshly coated area must then immediately be broadcast over its full surface with aggregate, again taking care to distribute it evenly. The masking tape should be removed before the coating hardens, to ensure clean edges and transitions.

Sweeping off:
Once the coating has hardened, take up the excess aggregate. **Pro-Tip:** To achieve a sharp contour and to prevent the coating from running under the masking tape, it is advisable to fill the unevenness beneath the tape with acrylic.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time). Once the coating has hardened, the excess aggregate must be removed and taken up by sweeping or vacuuming.
The curing time before the area can be released to traffic is approx. 5 hours at 20 °C.
Freshly applied vdw traffic surface coatings must be protected from rain until they have cured.

Important Notes

Substrate

Certain minimum requirements apply to the substrate for the vdw traffic surface coating systems.

• Hydraulically and bitumen bound substrates must be clean and dry. Weak parts and contamination such as rubber abrasion, oil etc. must be removed by suitable pre-treatment methods.
• Hydraulically bound substrates must have a bond strength of ≥ 1.5 N/mm².
• Bitumen bound substrates must not contain any flux oils. New asphalt surfaces must have been under traffic for some time. Otherwise a pre-treatment is required to remove the binder or mortar film present on the surface.
• Suitable weather conditions, relative humidity ≤ 80 %, object temperature ≥ 15 °C and at least 3 °C above the prevailing dew point temperature.
• Existing road markings must be removed.

Substrate preparation

• If necessary, pre-treat the substrate by grinding, abrasive blasting or milling until the required surface strength is reached.
• Clean the substrate free of dust.
• Mask off the area to be coated with adhesive tape.

Material preparation

• Mix component A (pigmented) beforehand, as the pigments can settle during storage.

• Components A and B are mixed thoroughly, i.e. for at least 3 minutes, with a slow-running single-hand stirrer or drill.

• Do not apply the material straight from the delivery container. After mixing, transfer it into a clean vessel and stir it through carefully once more.

Application

- On the prepared and cleaned substrate, mask off the area to be coated with adhesive tape.
- Press the adhesive tape down firmly.
- Apply the machine-mixed vdw 700 surface coating to the masked-off substrate and spread it with a rubber squeegee.
- Work over the spread binder with a sheepskin roller to achieve good wetting of the substrate and to ensure that the binder is distributed evenly over it.
- Immediately after the coating has been applied, broadcast aggregate onto the surface in excess.
- Then remove the adhesive tape to prevent material sticking to it.
- Consumption of vdw 700 surface coating: approx. 1 kg/m² depending on the condition of the substrate; on a very rough surface consumption can be higher. On problematic substrates, e.g. with a high texture depth, we recommend laying a test area to determine the actual consumption.
- Consumption of broadcast aggregate: approx. 6 kg/m² depending on the aggregate used.

Ecology

Disposal:

• Containers emptied of residues (free of drips and of material that can be scraped out) can be disposed of free of charge through the contract partners of Interseroh, telephone 0 22 03 / 91 47-0.
• Unmixed material must be disposed of as special waste. Mixed and hardened material is an inert product and requires no special disposal.
• For product-related information please refer to the container labelling and to the safety data sheets.

Further application examples









Timber bridge coating

Timber bridges, timber walkways and timber terraces are very popular. However, timber as a natural building material also has its drawbacks. In rain, ice and snow in particular, timber bridges, walkways and terraces can turn into dangerous slides for pedestrians and cyclists.









With **vdw 780** we offer you a timber bridge coating system on an epoxy resin basis that has been developed specifically for use on timber bridges, walkways and terraces. It can be used on existing structures as well as on new ones.

vdw 780 – Timber Bridge Coating

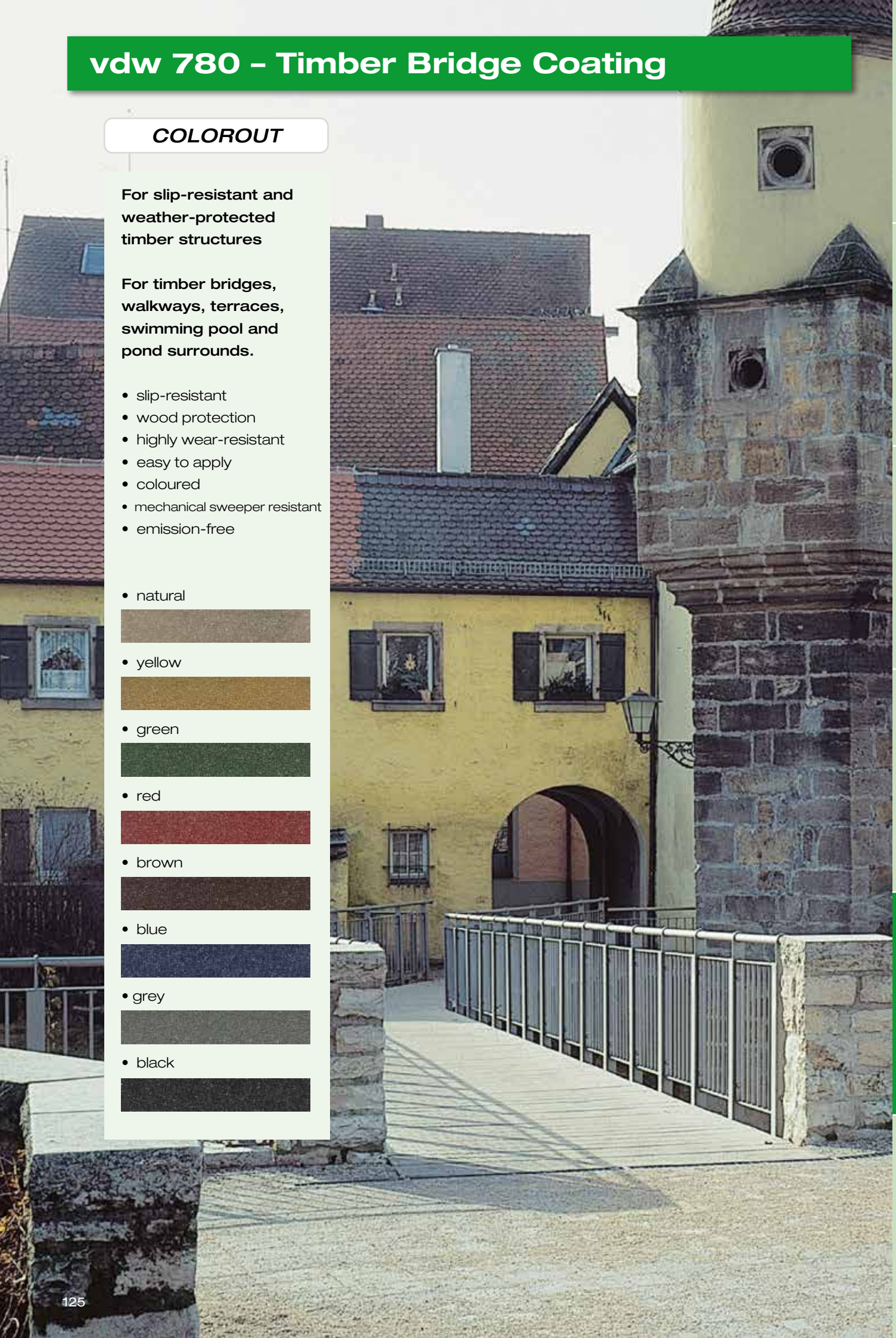
COLOROUT

For slip-resistant and weather-protected timber structures

For timber bridges, walkways, terraces, swimming pool and pond surrounds.

- slip-resistant
- wood protection
- highly wear-resistant
- easy to apply
- coloured
- mechanical sweeper resistant
- emission-free

- natural
- yellow
- green
- red
- brown
- blue
- grey
- black



Technical Data

Product description
Coating system to make timber structures slip-resistant.

Binder:	2-component, solvent-free, flexibilised epoxy resin
Packaging:	5 kg combined metal pack

	vdw 780 Base Coat	vdw 780 Top Coat
Material data		
Viscosity:	2500 mPas	approx. 5500 mPas
Adhesion:	Timber 2.5 N/mm²	
Elongation:	92.4 %	
E-Modulus:	100 N/mm²	200 N/mm²
Storage life:	1 year, stored dry and frost-free	1 year, stored dry and frost-free

Application data		
Mixing ratio:	A : B = 100 : 50	
Pot life:	approx. 20 minutes at 25 °C	
Outside temperature:	≥ 15 °C	
Surface temperature:	≥ 15 °C (at least 3 °C above the dew point temperature)	
Ecology		
Water hazard class:	Component A:	Class 2
	Component B:	Class 2
Disposal code:	Component A:	080410, 080299, 080499
	Component B:	080410, 080499

Packaging

vdw 780 Base Coat

Colours	Pack size	Art. no.
transparent	5 kg	780 102 705

vdw 780 Top Coat

Colours	Pack size	Art. no.	Colours	Pack size	Art. no.
transparent	5 kg	780 202 705	blue	5 kg	780 251 705
yellow	5 kg	780 211 705	brown	5 kg	780 280 705
green	5 kg	780 261 705	grey	5 kg	780 274 705
red	5 kg	780 232 705	black	5 kg	780 291 705

Application



Prepare the substrate



Mask off the area to be coated



Pour component B into component A and mix thoroughly



Spread with a sheepskin roller



After 4 hours at the earliest, mix the top coat components in the same way as the base coat



Apply the top coat with a sheepskin roller and ...



... broadcast aggregate while still fresh



follow the curing notes

Requirements:
Structurally sound timber construction, dry and clean substrate, suitable weather conditions, temperature ≥ 15 °C (observe the dew point temperature). The moisture content of the timber must not exceed 20 % by mass.
Only water-soluble preparations may be used to impregnate new timber substrates. Coating with vdw 780 must be carried out 2 – 3 weeks after impregnation.

Tools:
Drill and mixing paddle, paint roller, wheelbarrow, shovel and broom.

Preparation:
Clean the substrate carefully, mask off the area to be coated with masking tape.

Material preparation:
Mix the binder components with a slow-running stirrer, mixing time at least 3 minutes.

Application:
Apply the vdw 780 Base Coat binder with a paint roller to the area to be coated, masked off with masking tape. Remove the masking tape after application. Once the vdw 780 Base Coat has set, prepare and apply the vdw 780 Top Coat in the same way as the vdw 780 Base Coat. Broadcast the selected aggregate over the whole of the fresh vdw 780 Top Coat.

Brushing off:
Once the coating has hardened, take up the excess broadcast aggregate.

Curing:
The following points refer to a temperature of 20 °C and 65 % relative humidity (high temperatures shorten, low temperatures lengthen the curing time).
At 20 °C the hardening time up to release to traffic totals approx. 8 hours. Freshly applied vdw traffic surface coatings must be protected from rain until they have cured.

Important Notes

Substrate

Certain minimum requirements apply to the substrate for vdw traffic surface coating systems.

- The substrate must be structurally sound and serviceable, dry and clean.
- Suitable weather conditions, relative humidity ≤ 80 %, surface temperature ≥ 15 °C and at least 3 °C above the prevailing dew point temperature.
- The moisture content of the timber must not exceed 20 % by mass.

Only water-soluble preparations may be used to impregnate new timber substrates. Coating with vdw 780 must be carried out 2 – 3 weeks after impregnation.

Application notes

Preparation of the area to be coated

- Dust, moss, algae, rubber abrasion or oil must be removed by suitable cleaning methods such as **sweeping, vacuuming, steam cleaning or sand blasting**.
- Clean the substrate free of dust.
- Mask off the area to be coated with masking tape.

Material preparation

- The resin must be mixed thoroughly with the hardener, i.e. for at least 3 minutes, using a slow-running, machine-driven stirrer (300 – 400 rpm).
- Do not work straight from the delivery container! After mixing, transfer into a clean vessel and stir again carefully.

Application

- The base coat is applied with a paint roller to the areas masked off with masking tape.
- The pot life (approx. 15 minutes at 20 °C) must be observed.
- Remove the masking tapes.
- The top coat follows after hardening (approx. 4 hours at 20 °C). Apply the top coat to the areas masked off again with masking tape.
- Immediately after the top coat has been applied, broadcast aggregate over the area in excess.
- Remove the masking tapes.
- Once the **vdw 780 Top Coat** has hardened (approx. 4 hours at 20 °C), take up the excess broadcast aggregate.

Ecology

Disposal:

- Unmixed material requires disposal as special waste.
- Mixed and fully cured material is inert and does not require special disposal.
- Containers emptied of residues (drip- and scraper-free) can be disposed of free of charge through our certified contract partner. Further information at contact@gftk-info.de.
- Please refer to the container labelling and the safety data sheets for product-specific information.

Sample specification

Manufacturer:

Gesellschaft für
technische Kunststoffe mbH
Kottenforstweg 3
D-53359 Rheinbach-Flerzheim
Tel.: +49 (0) 22 25 / 91 57-0
mail@gftk-info.de
www.gftk-info.de

vdw 780 Timber Bridge Coating

Clean structurally sound timber bridge planks, mix **vdw 780 Base Coat** for at least 3 minutes and apply it to the area with a paint roller. After the curing time – depending on the weather, approx. 4 hours at + 20 °C and 65 % humidity – apply **vdw 780 Top Coat** in the same way and broadcast aggregate of grading 0.7 – 1.2 mm over the whole area immediately. Setting time approx. 4 hours; once cured, take up the excess aggregate.

Release to traffic after a total of approx. 8 hours.

Colours:	vdw 780 Base Coat:	transparent
	vdw 780 Top Coat:	transparent or coloured
	Broadcast aggregate: quartz sand:	natural or coloured

The technical preliminary notes on the condition of the substrate must be observed, as must the manufacturer's application instructions.

To be carried out only on a dry substrate and at surface temperatures of at least + 15 °C.

Consumption

Consumption of vdw 780 Timber Bridge Coating depending on the surface structure:

• vdw 780 Base Coat	on a smooth substrate	approx. 1,0 kg/m²
• vdw 780 Base Coat	on a grooved substrate	approx. 1,5 kg/m²
• vdw 780 Top Coat	on a smooth substrate	approx. 1,0 kg/m²
• vdw 780 Top Coat	on a grooved substrate	approx. 1,1 kg/m²
• Quartz sand	on a smooth substrate	approx. 6,0 kg/m²
• Quartz sand	on a grooved substrate	approx. 9,5 kg/m²
• Hard grain	on a smooth substrate	approx. 7,0 kg/m²
• Hard grain	on a grooved substrate	approx. 11,0 kg/m²

Safety notes

Occupational safety:

• When using **vdw 780 Timber Bridge Coating**, avoid contact with the skin. Wear safety glasses and protective gloves.
• Ensure sufficient ventilation when working in enclosed spaces.

Cleaning the tools:

• Clean the tools with cleaning agent (see accessories).



Planning and Application Notes

1. Technology & planning

General information

Surfacing areas with setts or slabs is one of the oldest and most proven forms of construction in human history. The first paved roads were laid by hand as early as around 2,500 BC. The method took a major step forward in the Roman Empire, where pozzolanic binders were used for the first time to stabilise road surfaces. Between antiquity and the 18th century hardly any technical innovations are recorded. Only with the rapid growth of the cities and the rising volume of traffic in the 19th and 20th centuries did extensive further development take place.

Today planners, contractors and clients have a wide choice of materials, construction methods and system solutions at their disposal – for public streets and squares as well as for private terraces and garden paths.
If a sett or slab surface is to remain functional and attractive in the long term, careful planning, proper execution and appropriate use and maintenance are essential.

With these planning and application notes we want to provide practical information, recommendations and tips that go beyond the content of the usual codes of practice and are not contained in our technical brochures. They are based on decades of practical experience in this field and are intended to help create, use and maintain durable, high-quality paved surfaces.

We welcome suggestions as to which topics or details of paving construction should be added in future editions.



Understanding the codes of practice – planning with certainty

Anyone planning or carrying out paved or slab surfaces today is faced with a large number of standards, guidelines and technical bulletins. Depending on the type of project and on the client, different requirements apply – and it is often unclear which set of rules is binding when no specific agreement has been made.
Our recommendation: a clear description of the work, with reference to a set of rules where appropriate, gives certainty in planning and execution.

These codes of practice are particularly relevant:

FLL-ZTV-Wegebau – landscape gardening, mainly private and semi-public areas

ATV DIN 18318 (VOB/C) – public and private areas, bound and unbound construction, for contracts with public clients

FGSV – M FP & M FP geb – surfacings with sett and slab paving, unbound and bound construction in road building

ZTV-Wegebau – focus on landscape gardening

With the "ZTV-Wegebau" (current edition: 2022) there is an independent code of practice that deals exclusively with sett and slab surfaces outside classic road areas. It is of central importance above all for landscape gardening.
It describes unbound as well as bound construction methods and defines minimum requirements for bedding and jointing materials – practice-oriented and tailored to the needs of private and commercial clients.

ATV DIN 18318 – the standard for every case

DIN 18318 forms part of VOB/C and applies to all paving and slab surfaces – regardless of use. It covers bound as well as unbound execution. In tenders for public areas it is the standard. Particularly important: its requirements apply to all construction methods – including mixed construction.

Planning certainty through system solutions

Even though many codes of practice do not give exact specifications for every case, they offer reliable guidance and count as recognised rules of engineering.
GftK mortar systems are developed for all of these requirements – from walkable paths to heavily trafficked traffic areas.

Use categories and traffic loading

Codes of practice distinguish between different load classes. This classification helps to choose the right combination of base course, bedding and jointing mortar.

In the **ZTV Wegebau** the application areas are divided into three use categories (N1–N3).

- **Use category N 1** – walkable areas only
- **Use category N 2** – trafficable paving for vehicles up to 3.5 t outside public road traffic areas,
- **Use category N 3** – trafficable as category N 2, but with occasional vehicle load up to 20 t, wheel load ≤ 5 t outside public road traffic areas

In the **DIN 18318** the application areas are likewise divided into three use categories according to traffic loading (walkable – trafficable up to 3.5 t – trafficable over 3.5 t).

- **Walkable**
- **Trafficable, vehicles up to 3.5 t**
- **Trafficable, vehicles over 3.5 t**

The **vdw products** carry pictograms that make it easy to assign them to the right category.



N 1 / walkable



N 2 / vehicles up to 3.5 t



N 3 / vehicles over 3.5 t



Our tip from practice
Rely on tested system components that are matched to one another. That is how you make sure that all the layers – from the pavement down to the joint – work together optimally. Our application engineering team will be glad to advise you on individual construction methods and special requirements.

Construction methods at a glance – the right build-up for every surface

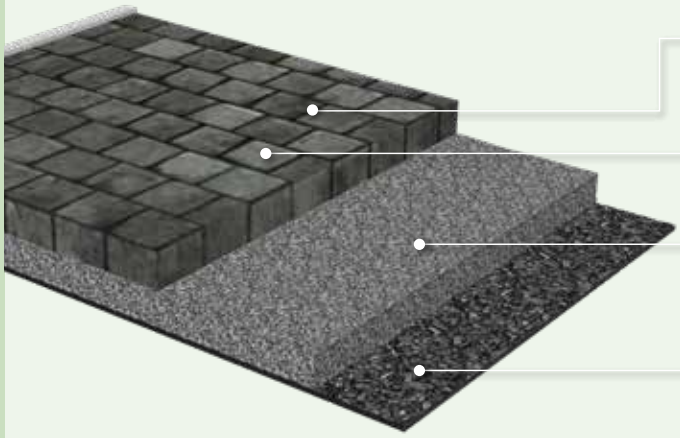
The choice of construction method is decisive for the function and durability of a sett or slab surface. Depending on use, substrate, material and loading, different structural build-ups come into question – from the classic unbound version through to the fully bound system solution.

Use category to ZTV Wegebau	N1		N2		N3	
Use classification to DIN 18318	walkable		trafficable vehicles up to 3.5 t		trafficable vehicles over 3.5 t	
	ZTV Wegebau 2022	DIN 18318 2018	ZTV Wegebau 2022	DIN 18318 2018	ZTV Wegebau 2022	DIN 18318 2018
Unbound construction	✔	✔	✔	✔	✔	✔
Mixed construction with unbound bedding	✔	✔	✘	✘	✘	✘
Mixed construction with bound bedding	✔	✔	✔	✘	✘	✘
Fully bound construction	✔	✔	✔	✔	✔	✔

✔ permitted ✘ not permitted

All common construction methods can be realised properly and safely with the vdw mortar systems.

unbound construction



Joint
vdw VarioSand

Concrete block paving

Unbound bedding
Mineral aggregate mixes, e.g. in grain sizes 1/3, 2/4, 2/5, 2/8

Unbound base course
Minimum thickness approx. 21 cm

Mixed construction with unbound bedding/slab paving



Movement joint
vdw 885 plus FugenFlex at least at adjoining structures

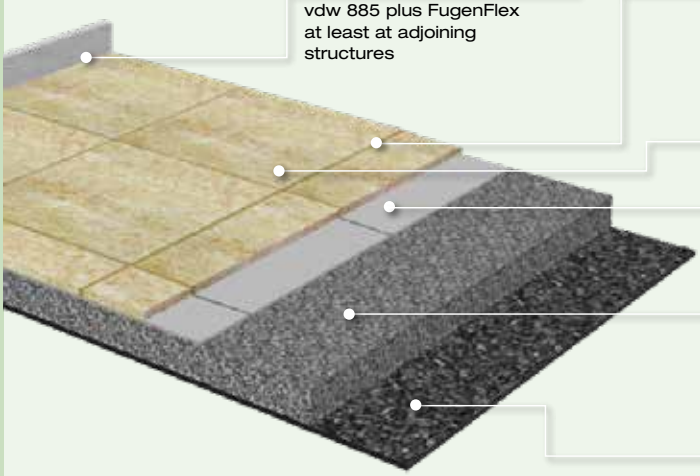
Bound joint
Reaction-resin joint on an epoxy or polybutadiene base
vdw 815 ultra 2K Slab Joint Mortar/
vdw 840 plus 1K Jointing Mortar

Setts/slabs
Minimum thickness: 3 cm

Unbound bedding
Mineral aggregate mixes, e.g. in grain sizes 1/3, 2/4, 2/5, 2/8

Unbound base course
Minimum thickness approx. 21 cm

Mixed construction with bound bedding/slab paving



Movement joint
vdw 885 plus FugenFlex
at least at adjoining
structures

Bound joint
Reaction-resin and cement-based products
e.g. vdw 815 ultra 2K Slab Joint Mortar
vdw 850 plus 2K Paving Joint Mortar
vdw 415 Cement Based Jointing Mortar Color

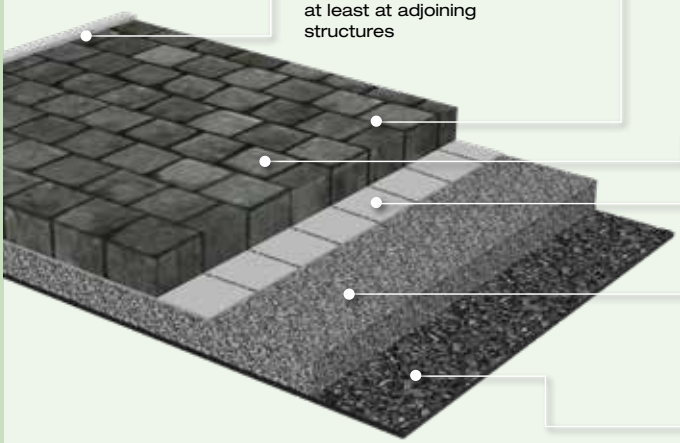
Slab paving
Minimum thickness: 2 cm

Adhesive slurry
vdw 495 Universal Adhesive Slurry
Layer thickness: 2–5 mm

Bound bedding
hydraulically bound bedding mortar/
drain mortar using
vdw 480 Bedding Compound
Bedding thickness: 4 – 10 cm

Unbound base course
Minimum thickness approx. 21 cm
depending on the frost protection zone

Mixed construction with bound bedding/sett paving



Movement joint
vdw 885 plus FugenFlex
at least at adjoining
structures

Bound joint
Reaction-resin and cement-based products
e.g. vdw 850 plus 2K Paving Joint Mortar
vdw 400 Cement Based Jointing Mortar

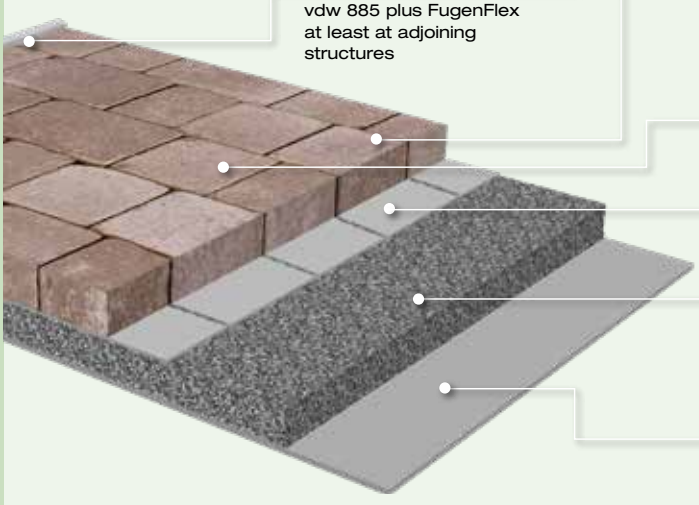
Paving sett

Adhesive slurry
vdw 495 Universal Adhesive Slurry
Layer thickness: 1 – 3 mm

Bound bedding
hydraulically bound bedding mortar/
drain mortar using
vdw 480 Bedding Compound
Bedding thickness: 4 – 10 cm

Unbound base course
Minimum thickness approx. 21 cm
depending on the frost protection zone

Fully bound construction



Movement joint
vdw 885 plus FugenFlex
at least at adjoining
structures

Bound joint
Reaction-resin and cement-based products
e.g. vdw 850 plus 2K Paving Joint Mortar
vdw 400 Cement Based Jointing Mortar

Paving sett
Minimum thickness: 6 cm

Adhesive slurry
vdw 495 Universal Adhesive Slurry
Layer thickness: 1 – 3 mm

Bound bedding
hydraulically bound bedding mortar/
drain mortar using
vdw 480 Bedding Compound

**Hydraulically bound
drainage concrete base course**
e.g. using
vdw 480 Bedding Compound
Minimum thickness 15 cm

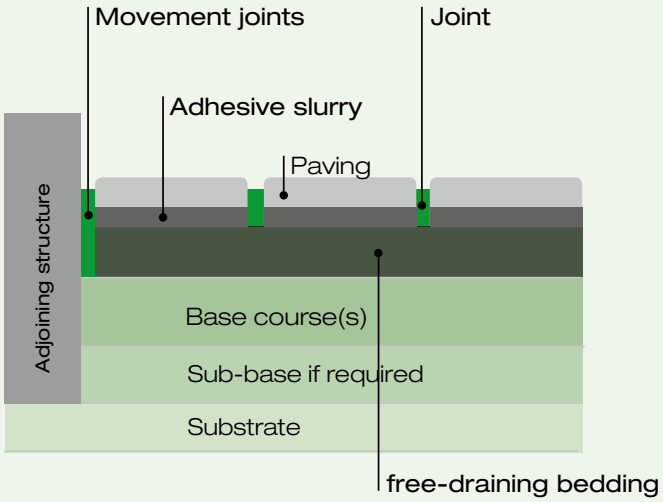
Good to know: build-up heights and layer thicknesses

- Base course (unbound): min. 20–25 cm
- Bedding (bound): 4–10 cm, depending on material and use
- Joint (bound): min. 3 cm joint depth

(Ceramic terrace elements on drain mortar min. 2 cm)

It is important that all components are optimally matched to one another and designed for the intended use. Our technical advisory service will be glad to help you make the right selection.





Good to know: capillarity
On slab and sett surfaces in unbound and bound construction, the water permeability of the layers should increase from top to bottom. Rainwater – including the substances dissolved in it – can then drain away better.

A natural counterpart to this is the so-called **capillary effect**: in fine pores or narrow gaps, water rises against gravity.
In unbound construction in particular, this capillary rise of moisture can carry salts and minerals from the substrate up to the surface. The visible consequences are often **efflorescence**, which stands out above all on **partly covered areas**: where no rain reaches, the residues remain on the surface because they can neither seep away nor be washed off. This typical appearance is also known as the **"carport effect"**.

To counteract this effect, care must be taken when selecting the bedding and base courses to ensure that they are sufficiently capillary-breaking. This means that the materials used should be such that they suppress the capillary rise of water as far as possible.



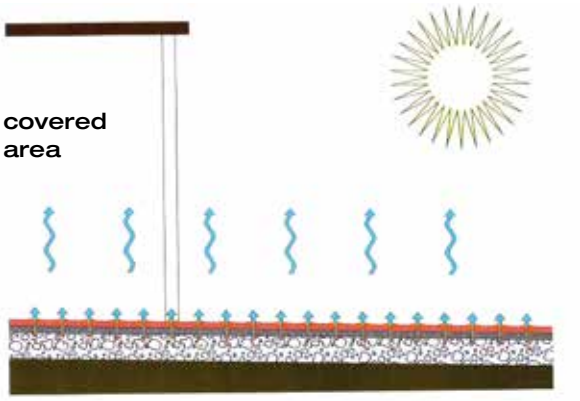
❶ Basalt chippings 1 – 3
❷ Basalt chippings 2 – 5
❸ Quartz gravel 1.4 – 2.5
❹ Quartz gravel 2.0 – 3.1
❺ Diabase 2 – 5
❻ Marble chippings 4 – 8
❼ vdw 490 Trass Drain Mortar
❽ Basalt chippings 2-5 +
vdw 480 Bedding Compound, mix ratio 1:5

CARPORT effect

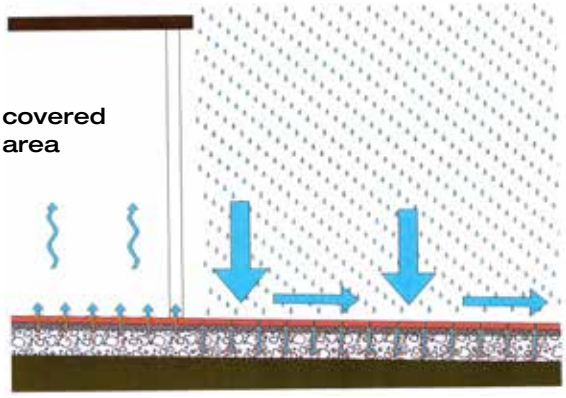
Under covered areas, capillary water transport through the bedding, the joints and the paving – carrying fine particles and salts with it – can lead to staining and to deposits of substances on the surface once the water has evaporated.







(Fig. 1)



(Fig. 2)

(Fig. 1) In dry weather / sunshine, capillary water transport through the bedding, joints and paving, carrying fine particles and salts with it; the substances are then deposited on the surface and the water evaporates across the whole area.

(Fig. 2) In precipitation /water ingress into the pavement through joints and paving, and surface run-off carrying away fine particles and salts, only in the freely weathered area.

One possible cause of the carport effect can be ruled out by choosing the right bedding. Capillarity is influenced by a number of factors.

These include:

- Bedding thickness
- Binder
- Grading curve
- Bedding material (rounded grain, crushed material, etc.)

Ceramic slab paving – systems, build-up and recommendations

Ceramic paving elements are becoming increasingly popular in landscape gardening.



They are dimensionally stable, easy to maintain and visually of particularly high quality. At the same time they place special demands on planning, build-up and jointing – above all because of their small thickness and their low water absorption.

For designing modern terrace surfaces with ceramic finishes, the building and ceramics industry today offers a wide choice of products.
Alongside all-ceramic terrace slabs – as a rule 2 or 3 cm thick – numerous so-called ceramic composite slabs are also available. These consist of a concrete core bonded permanently and positively to a ceramic top layer by a special contact layer. Ceramic composite slabs come in a variety of formats and design variants.

ZTV-Wegebau contains no guidance on the use of ceramic composite slabs – professional, detailed solutions are given in our brochure **“Planungshinweise zur Verlegung von Terrassenplatten mit keramischer Oberfläche” (Planning notes for laying terrace slabs with a ceramic surface)**






Recommended system build-ups

Depending on the planned use and on the structural conditions we recommend two matched system solutions for ceramic paving:
1. Water-permeable build-up – e.g. for terraces with a water-permeable base course

2. Water-impermeable build-up – e.g. for balconies or roof terraces with waterproofing

In both cases a stable and permanently load-bearing support for the often only 20 mm thick slab elements is decisive. It can only be ensured by bonded laying in a free-draining bedding mortar. **vdw 470 Gala Drain Mortar** or a site mix with **vdw 480 Bedding Compound** have proved themselves here.

Important note on adhesion:

Because ceramic slabs absorb virtually no water and many of their backs are heavily profiled, a reliable bond is essential. For this we recommend the **vdw 495 Universal Adhesive Slurry**, applied with a notched trowel and bedded directly into the fresh mortar bed.

GftK system build-up

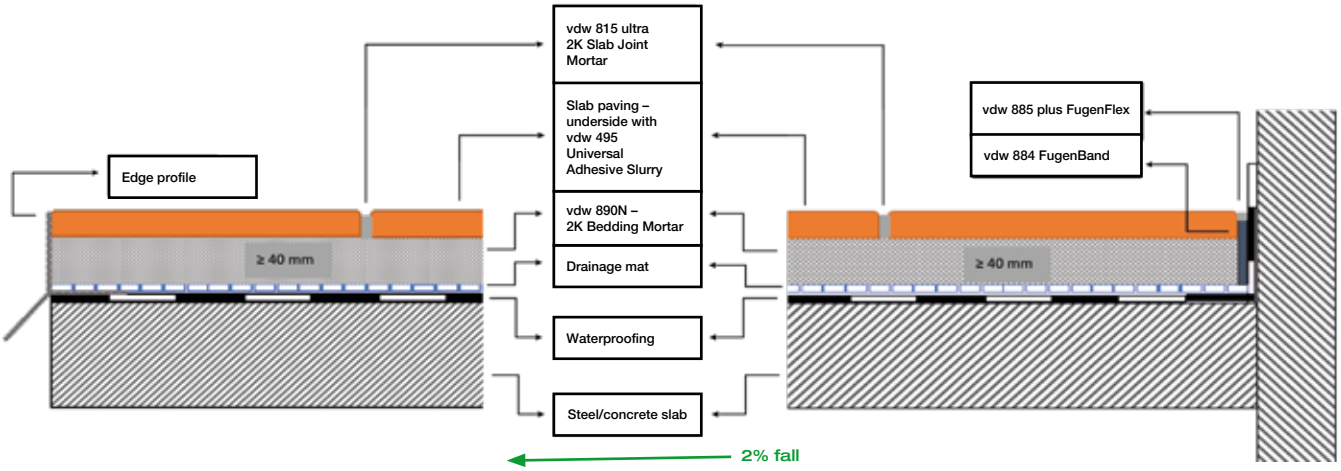
Slab paving on balconies and roof terraces



Paving constructions with slabs of natural stone, reconstituted stone or ceramic in a bound bedding layer on waterproofed substrates – for example on balconies, roof terraces or ground-supported terraces on a continuous concrete or reinforced concrete slab – do not fall within the scope of the ZTV Wegebau or the DIN 18318. Planning for pedestrian or trafficked paving likewise generally assumes unbound bedding layers.
Guidance on proper construction build-ups on such waterproofed substrates is to be found, if at all, in the technical bulletins of the Deutscher Naturwerkstein-Verband or of the Fachverband Fliesen und Naturstein.

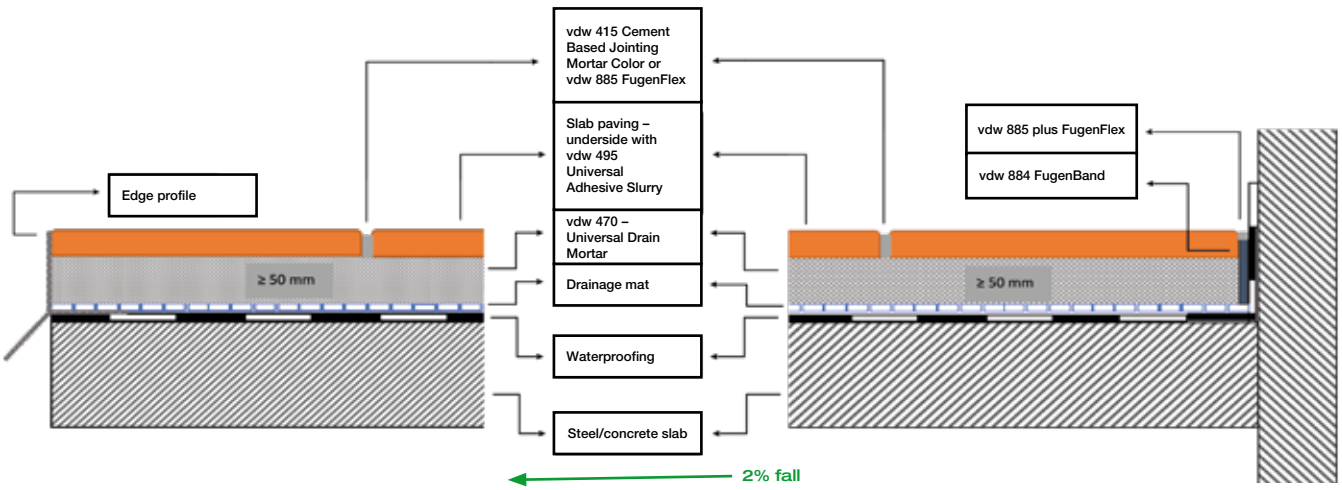
The following system build-ups are intended as guidance for proper constructions with slabs of natural stone, reconstituted stone or ceramic laid firmly in a bedding mortar and jointed with a water-permeable joint.

Slab paving in a bound bedding layer on a waterproofing level (substrate not permeable to water)
Water-permeable jointing (vdw 815 ultra)



The following system build-ups are intended as guidance for proper constructions with slabs of natural stone, reconstituted stone or ceramic laid firmly in a drain bedding mortar and jointed with a water-impermeable joint.

Slab paving in a bound bedding layer on a waterproofing level (substrate not permeable to water)
Water-impermeable jointing (vdw 415 or vdw 885 FugenFlex)



2. Building materials

Building material requirements

The bedding and jointing mortars required for bound and mixed construction methods have to meet a number of technical requirements when they are used and when the codes of practice are taken into account.
Depending on how the contract is drawn up and on the DIN standard or code of practice referred to, these requirements become a definitive part of that contract.
The minimum values for the technical parameters (e.g. compressive strength, bond strength, freeze-thaw resistance and freeze-thaw de-icing salt resistance) are to be met by the manufacturer and stated accordingly.
You will therefore find them in the respective vdw product documents.

Product requirements for bedding mortar

		Compressive strength in N/mm² or MPa			Bond strength in N/mm² or MPa		
Use category / load class		ZTV Wegebau	DIN 18318	FGSV M FP geb	ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 10.0 *	≥ 10.0	≥ 30.0 mean value ≥ 25.0 single value	≥ 0.4	≥ 0.4	≥ 1.5 mean value ≥ 1.2 single value
N2	trafficable, vehicles up to 3.5 t	≥ 20.0 *	≥ 20.0		≥ 0.8	≥ 0.8	
N3	trafficable, vehicles over 3.5 t	≥ 30.0 *	≥ 30.0		≥ 1.0	≥ 1.0	

* Bedding type 1
Info: bedding type 2 (> 10 N/mm² N1 – N3)



Product requirements cement jointing mortar

Use category / load class		Compressive strength in N/mm² or MPa			Bond strength in N/mm² or MPa		
		ZTV Wegebau	DIN 18318	FGSV M FP geb	ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 10.0	≥ 10.0	Type A = 40.0 – 70.0 Type B = 30.0 – 40.0	≥ 0.4	≥ 0.4	≥ 1.5 mean value ≥ 1.2 single value
N2	trafficable, vehicles up to 3.5 t	≥ 20.0	≥ 20.0		≥ 0.8	≥ 0.8	
N3	trafficable, vehicles over 3.5 t	≥ 30.0	≥ 30.0		≥ 1.0	≥ 1.0	

Product requirements cement jointing mortar

Use category / load class		Static E-modulus		Frost/de-icing salt resistance		
		ZTV Wegebau	FGSV M FP geb	ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥14,000 MPa and ≤ 22,000 MPa	≥ 17,000 MPa and ≤ 22,000 MPa (Type A) ≥ 14,000 MPa and ≤ 17,000 MPa (Type B)	≤ 500	≤ 500	≤ 500
N2	trafficable, vehicles up to 3.5 t					
N3	trafficable, vehicles over 3.5 t					





Product requirements reaction-resin jointing mortar

Use category / load class		Compressive strength in N/mm² or MPa			Bond strength in N/mm² or MPa		
		ZTV Wegebau	DIN 18318	FGSV M FP geb	ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 5.0	≥ 5.0		≥ 0.2	≥ 0.4	
N2	trafficable, vehicles up to 3.5 t	≥ 15.0	≥ 15.0		≥ 0.8	≥ 0.8	k. A.
N3	trafficable, vehicles over 3.5 t	≥ 25.0	≥ 25.0		≥ 1.0	≥ 1.0	







What must a bound joint / a jointing mortar achieve within a paved surface?

The relevant codes of practice DIN 18332 (natural stone work) and DIN 18333 (reconstituted stone work) say relatively little about the properties of the jointing material.
ZTV-Wegebau names the type of binder for the jointing mortar to be used (depending on the construction method and the use category) and sets requirements for its compressive and flexural tensile strength and for its de-icing salt resistance. It also defines minimum and maximum joint widths in relation to the paving format and makes statements on minimum joint depths.

Since the codes of practice (ZTV-Wegebau & DIN 18318) say nothing about the arrangement of movement joints within the surface, however, the following question arises:
What must joints and jointing mortars be like if cracking within them is to be avoided?

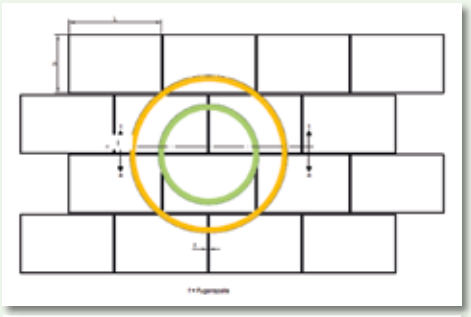
As a rule, cracking cannot necessarily be ruled out even when every technical specification is observed. This fact is described, among other places, in the FGSV paper “Arbeitspapier – Flächenbefestigungen mit Pflaster- und Plattenbelägen in gebundener Ausführung – MFP geb 2018”. Isolated cracks over 0.2 mm and up to about 0.8 mm wide can occur. Visually they can usually be disregarded, but their effect on the service life of the paving should be assessed in relation to the traffic loading present.

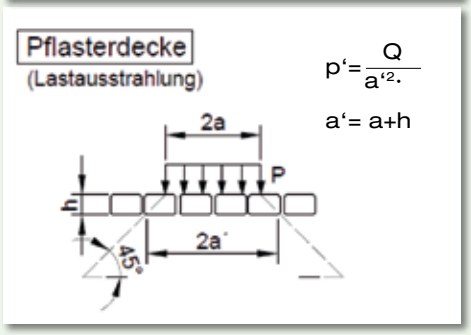
Every building material has a particular coefficient of expansion, which describes how much a component changes in length when the temperature changes. The colour of the surface is likewise of major importance for the loads in the joint. The darker the shade, the higher the surface temperature and hence the temperature difference between the warm and the cold season.
For these reasons the horizontal stresses resulting from thermally induced changes in the length of the paving materials, and any residual shrinkage of concrete products, cannot be defined precisely in kind or magnitude in advance.

Compressive strengths

The quality of a jointing mortar is often deduced from the level of its compressive strength. In tenders and in the specifications of tendering bodies, ever higher values are frequently asked for or demanded. What is often overlooked, however, is that the jointing mortar alone cannot determine how durable a finished surface will be.
Cement-based mortars in particular reach higher values than the paving units themselves, which may lead to damage. For planned surfaces the greatest likely traffic loading is always the yardstick for construction. The paved surface has to pass the force and pressure arising from above and/or from vehicle movement downwards without losing its shape. Jointing mortars can only have a supporting or securing effect here, never a rescuing one.

Kilogram/Newton/Kilo-Newton Conversion of compressive load		
1 kg	10 N	0,01 kN
1 t	10.000 N	10 kN
1 t/m²	0,01 N/mm²	10 kN/m²
10 t/m²	0,10 N/mm²	100 kN/m²
25 t/m²	0,25 N/mm²	250 kN/m²
Car wheel load: 500 kg / contact area 200 cm² = 0.5 N/mm²		
Car wheel load: 1000 kg / contact area 200 cm² = 1.0 N/mm²		
Truck wheel load: 7.5 t / contact area 800 cm² = 0.9 N/mm²		
Truck wheel load: 20 t / contact area 1,400 cm² = 1.42 N/mm²		





Joint proportion – % of the area

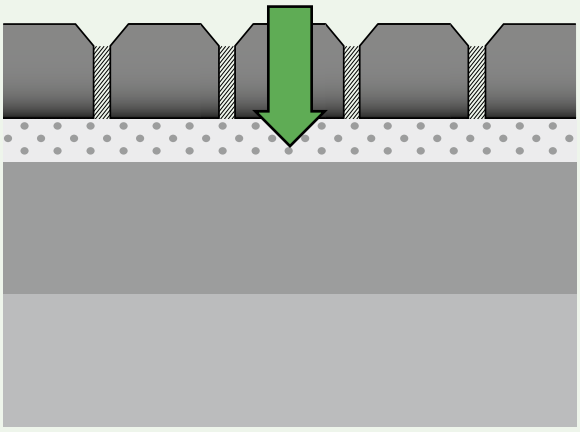
Percentage of joints per m²					
Format	**Joint width**				
	3 mm	**4 mm**	**5 mm**	**10 mm**	**15 mm**
600 x 600	0,99	1,32	1,65	3,25	4,82
600 x 400	1,24	1,65	2,05	4,04	5,97
400 x 400	1,48	1,97	2,45	4,82	7,10
300 x 300	1,97	2,61	3,25	6,35	9,30
200 x 200	2,93	3,88	4,82	9,30	13,47
120 x 160	4,23	5,59	6,91	13,12	18,73
140 x 180	3,70	4,89	6,06	11,58	16,63
160 x 180	3,45	4,56	5,65	10,84	15,60
100 x 120	5,28	6,95	8,57	16,08	22,71
100 x 100	5,74	7,54	9,30	17,36	24,39
80 x 100	6,42	8,42	10,36	19,19	26,77
80 x 80	7,10	9,30	11,42	20,99	29,09
60 x 80	8,20	10,71	13,12	23,81	32,63
40 x 60	11,41	14,77	17,95	31,43	41,82
50 x 50	11,00	14,27	20,57	30,56	40,83
40 x 40	13,47	17,36	20,99	36,00	47,11

Bedding mortar

Bedding mortar – more than just a base

Once installed, a bedding mortar must do more than just “carry”. It should:

- let water through (free-draining),
- absorb stresses (e.g. with changes in temperature),
- stay permanently stable (resistant to pressure and deformation) and
- not draw water by capillary action (so that no rising damp occurs).



What distinguishes a free-draining bedding mortar?

A free-draining mortar has a no-fines structure – i.e.:

- the aggregate grains touch only at points,
- voids form between the grains,
- the cement paste coats the grains – so the system stays open-pored.

Further characteristics:

- use of hydraulic binders or reaction resins
- min. 15 vol.-% void content
- Permeability to water: ≥ 10^{-4} m/s
- compressive strength, by use: ≥ 10 – 30 N/mm²
- layer thickness: 4 – 10 cm

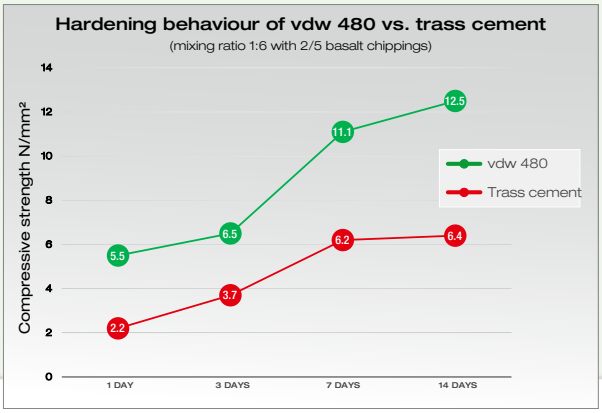
Ways of producing a bedding mortar

vdw 480
site mix (chippings + Bedding Compound)





vdw 470
ready to use, in bags



What are the advantages of **vdw 480 Bedding Compound** over a cement (trass cement) as binder?

• pleasant consistency and no tearing when spreading	➡ easier working, hardly any build-up on the screeding tool and therefore rapid progress on site
• high strengths	➡ up to 30 N/mm² possible
• very high yield	➡ At a mixing ratio of 1:6 for load class N3 or 1:8 for load class N1 of the ZTV-Wegebau
• rapid hardening	➡ walkable early, can be jointed 24 h after installation
• optimised formula	➡ no efflorescence despite the rapid hardening
• capillary-passive effect through high-grade polymer modification	➡ prevents rising capillary moisture with fine chipping gradings

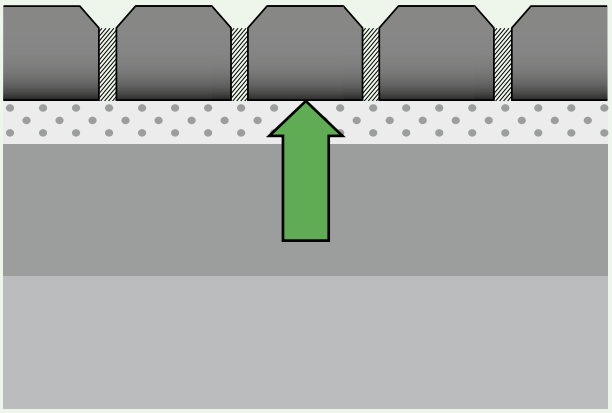
Bedding mortar requirements for the finished work

		Compressive strength in N/mm² or MPa		
Use category / load class		ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	≥ 5.0*	≥ 4.0	≥ 17.0
N2	trafficable, vehicles up to 3.5 t	≥ 10.0*	≥ 10.0	
N3	trafficable, vehicles over 3.5 t	≥ 15.0*	≥ 15.0	

* Bedding type 1
Info: bedding type 2 (> 4 N/mm² N1 – N3)

Bonding agent

Adhesive slurry – the link between sett/slab and bedding
In bound and mixed construction methods an adhesive slurry is always required in order to create a positive bond between the paving and the bedding.



Use and effect:
- applied in a suitable consistency to the underside of the slab (e.g. by dipping or combing with a notched trowel),
- ensures optimum bond strength (≥ 0.4 – 0.8 N/mm² depending on use)
- prevents debonding and voids.
- also known as “bonding slurry” or “contact bridge”

Granite setts in bedding mortar – dipping the setts at a slurry consistency into the **vdw 495 Universal Adhesive Slurry**

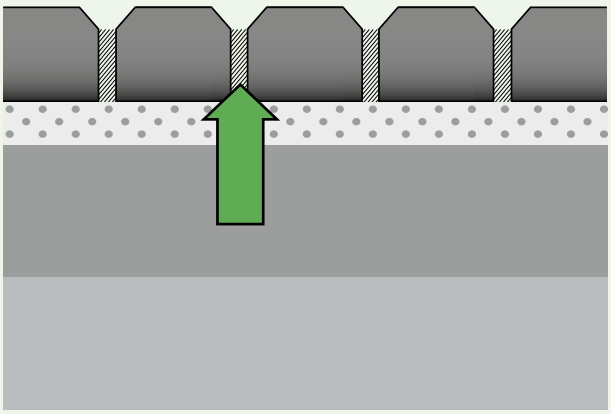


Ceramic terrace elements – combing the **vdw 495 Universal Adhesive Slurry** onto the back of the slab



Joint

Jointing mortars are the jointing materials used for bound joints.



Characteristics:

- binder: reaction resins or cement
- as a rule ready-mixed mortar
- requirements for frost/de-icing salt resistance (cement joints only)
- min. compressive strength ≥ 10 to ≥ 40 N/mm², depending on use and code of practice
- min. bond strength ≥ 0.4 to ≥ 1.5 N/mm², depending on use and code of practice

Binder: cement
hydraulically setting
e.g. **vdw 400**



Binder: polybutadiene
1K jointing mortar
vdw 840 plus



Binder: epoxy resin
2K jointing mortar
e.g. **vdw 850 plus**



Jointing mortar requirements for the finished work

		Bond strength in N/mm² or MPa		
Use category / load class		ZTV Wegebau	DIN 18318	FGSV M FP geb
N1	walkable	no loss of bond	no loss of bond	k. A.
N2	trafficable, vehicles up to 3.5 t	≥ 0.4	≥ 0.4	
N3	trafficable, vehicles over 3.5 t	≥ 0.5	≥ 0.5	

"Flexibility" of joints

Paving in bound construction is subject to various movements. Temperature fluctuations, the uptake and release of water or moisture, and the age of the materials as well (e.g. later shrinkage of concrete products) all generate stresses. Temperature differences in particular cause considerable differences in expansion and contraction, depending on the material.
Example: at a temperature difference of 70 K (-25 °C to + 45 °C) granite shows a change in length of 0.5 mm/m – porphyry, by contrast, 1.0 mm/m. These horizontal stresses can only be relieved through the joints. Using a tensile-resistant bedding (drain mortar) and a Universal Adhesive Slurry as the contact layer between the bedding layer and the sett or slab reduces these changes in length by restraint.
Vertical stresses also arise from load transfer (use), and these act on the whole construction.

The deformability of a material (flexibility) under an applied force is defined by the term "E-modulus". Setts show a range of E-moduli from 30,000 – 85,000 N/mm², depending on the material.
By comparison: cement-based joints = approx. 20,000 – 30,000 N/mm², synthetic-resin-bound joints (depending on composition) = approx. 900 – 20,000 N/mm².
The smaller the E-modulus, the higher the deformability (flexibility). It follows that synthetic-resin-bound joints have a considerably higher deformability than cement-based joints.

In everyday language, however, the term "flexible" is associated with deformation properties such as those of a silicone. A synthetic-resin-bound jointing mortar cannot achieve this form of flexibility. That is already clear from the fact that the recognised rules of technology set defined requirements for the compressive strength of jointing mortars – but none for flexibility.
Since compressive strength is inversely proportional to deformability (flexibility), deformability (flexibility) decreases as compressive strength rises.

The use of "more flexible" synthetic-resin jointing mortars can allow larger fields without movement joints, but careful planning of the dimensioning of movement joints remains absolutely essential.



Movement joints – the problem

The relevant codes of practice give no exact specifications for forming movement joints in sett and slab pavements. Movement joints are frequently not planned accurately enough. Thermal changes in the length of the pavement generate stresses in the paving that can, however, only be calculated approximately.

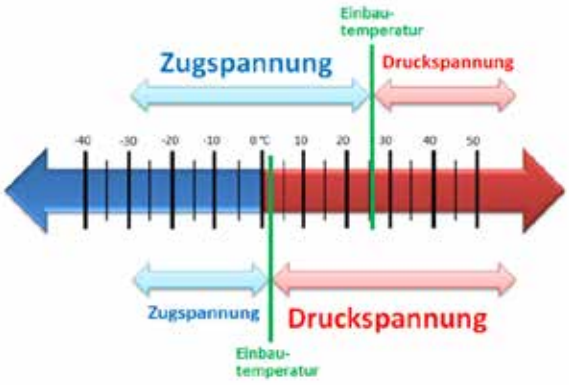
Different or no information in the codes of practice:

DIN 18318	➡	no information
DNV bulletin "Pflaster"	➡	Field size 25 – 27 m², maximum length 7 m, at fixed components and at built-in elements
WTA bulletin	➡	Division into fields (no size given), length 5 – 7 m, along upstanding built-in elements
FGSV	➡	Division into fields (no size given), length 4 – 6 m, along upstanding built-in elements
ZTV-Wegebau 2022	➡	Division into fields, maximum length 6 m and at adjoining components and built-in elements

Why are movement joints indispensable?
Sett and slab paving is subject to movement. This is caused by:

- temperature changes (expansion and shrinkage),
- moisture uptake and release,
- material ageing (e.g. shrinkage of concrete),
- traffic loads (vertical stresses from use).

If these stresses are not relieved in a controlled way, cracks are likely – especially in the joint. Movement joints let the surface "relax".



Installation temperature:
The installation temperature has a considerable influence on the stress behaviour (tensile or compressive stresses) of the paving surface. At lower installation temperatures more compressive than tensile stresses occur; at higher installation temperatures it is the other way round and the tensile stresses are higher.



The dimensioning of movement joints depends on many factors:

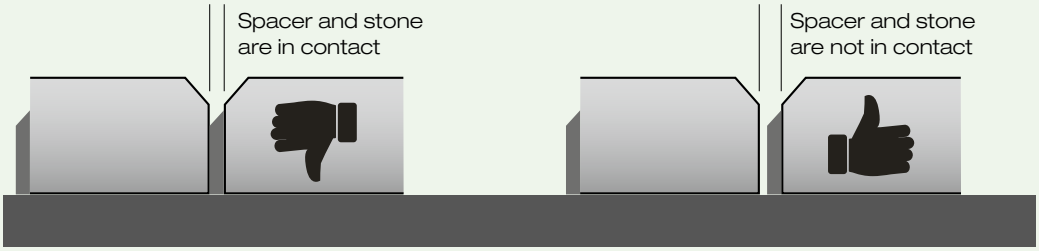
- paving material (stone, concrete, ceramic)
- format & colour
- installation temperature
- joint type & width
- bedding and jointing material
- surface geometry & bond pattern
- ambient conditions (e.g. sun exposure/location)

Our recommendation:
GftK movement joint planning aid

3. From practice, for practice

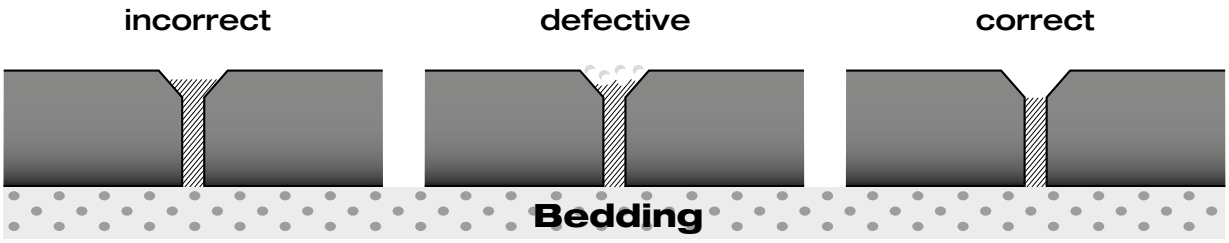
Joint widths

The dimensioning of joint widths in sett and slab paving is defined precisely and uniformly in the relevant codes of practice.
It is important that the joint spaces are of a minimum width over the entire thickness of the sett or slab. Integrated transport or anti-shift lugs must be distinguished from these.



Exposing chamfers

The relevant standards and codes of practice require the sett or stone paving to be jointed over its full depth.
To avoid damaging the often high-quality or finished surface of the material laid, the chamfer or rounded edge must always be exposed.
After jointing, the tops of the setts or slabs must be cleaned carefully.



Example of simply exposing the chamfers on slab edges



Here is the video example:

“clean” working

Once a paved surface has been laid, jointing is the final operation, the one that gives the whole job its finishing touch – the icing on the cake, so to speak.
Especially when jointing with a two-component epoxy resin mortar, clean working is what achieves an optimum result.

What needs particular attention?
All tools should be cleaned frequently during jointing: the coconut fibre broom, the rubber squeegee and the work shoes.
If they are not cleaned often and promptly, the soles keep spreading binder film over the paved surface. Applied again and again, in places on top of itself, it can leave footprints visible on the finished surface.

Here is the video example:





Something similar can happen if the coconut fibre broom is not cleaned. The broom is meant to smooth the joints and to remove excess aggregate and binder film from the paving. Because the bristles can only take up a limited amount, as cleaning progresses the binder is merely spread around instead of being picked up. It is therefore advisable to rinse the broom briefly with a jet of water every 4–5 m² and so wash the binder out of it.





Working cleanly also means protecting all adjoining surfaces from adhering binder by masking them beforehand or likewise pre-wetting them.

Here is the video example:

Absorbent natural stones / Asian hard stones

Laying, and above all jointing, absorbent paving materials calls for particular care. This concerns not only the planning of the work involved and the choice of bedding and jointing materials, but also the pre-treatment or after-treatment of the setts or slabs.
Some natural stones not only have a relatively high water absorption capacity, they also react sensitively and sometimes unevenly on contact with bedding and jointing materials. Asian hard stones (colloquially also called “Chinese granites”) increasingly belong to this group.
Water absorption capacity (absorbency) is not, however, the only criterion here. Capillarity, which is influenced by the size of the pores and their distribution in the stone, is also responsible for the comparatively high risk of discoloration in the course of laying and jointing.

The following four types in particular are among the frequently used natural stones referred to above for which particular care is necessary:

- **G 603 – granite** (also known under the following names, among others: Padang Light, Padang Hell, Padang White, Padang Cristal)
- **G 654 – quartz monzodiorite** (also known under the following names, among others: Padang Dunkel, Padang Dunkelgrau, Sesame Black)
- **G 682 – granite** (also known under the following names, among others: Padang Gelb, Giallo Padang, Light Golden Sand)
- **G 684 – basanite** (also known under the following names, among others: Padang Grau, Impala China, Black Basalt, Absolute Black)

For the reasons given above, pre-treating the setts or slabs with an impregnation (**vdw 950 StoneProtect plus 3 in 1**) is strongly recommended in order to reduce or avoid the risk of discoloration becoming visible after jointing.
When impregnating with **vdw 950 StoneProtect plus 3 in 1**, the side edges of the setts or slabs can be treated as well as the surface.

Stone protection

Stone protection is an additional aid that narrows the open-pored surface – even the micropores in natural stone – and so makes the stone surface less susceptible to moisture, dirt and moss. **vdw 950 StoneProtect plus 3 in 1** can be used on many natural and concrete stones. It reduces the absorbency of the treated paving and largely prevents water, oils and greases from penetrating it. Dirt therefore only lies on the surface and the areas are easier to clean. The colour of the treated paving is not changed, or only slightly. Certain substrates can appear darker after treatment with **vdw 950 StoneProtect plus 3 in 1**. We recommend laying a test area. **vdw 950 StoneProtect plus 3 in 1** may only be used on surfaces that have already been jointed once any binder film present has weathered off completely; with cement-based jointing, after seven days at the earliest. vdw 950 StoneProtect plus 3 in 1 combines:

1. Oil repellency
Oleophobing means “making oil-repellent”, that is applying liquids that make surfaces dirt- and oil-repellent. This prevents the pores in concrete or natural stone from taking up oil or oil-related substances. Typical applications are natural stone paving on terraces or steps.

2. Water repellency
The surface tension of the water is changed. This narrows the capillary pores in the paving surface concerned. Unlike a “varnished” or “sealed” surface, however, the water-repellent stone or paving remains permeable to vapour. Water bound in the bedding can therefore escape as vapour through capillary suction.

3. Jointing aid
Supporting effect during jointing and cleaning off after work with epoxy resin mortars.

Algae and moss growth

Most black, green and – increasingly often – red discolorations on paving setts or on concrete are algae. Areas that lie mainly in the shade are affected most often. Mosses frequently form on such areas as well.

However, this increasingly also applies to places permanently exposed to direct sunlight, where algae and mosses would not normally survive. Many dry algae can also survive for a long time without moisture.
Mosses and algae obtain their energy from photosynthesis and depend on water or moisture for their growth. They do not, however, destroy the substrate. They are therefore an effect of the environment and the site on the area concerned and are unrelated to the jointing material installed.

The following distinctions can be drawn:

Red algae
Red algae (Rhodophyta) are red-coloured algae. They have become more common in Germany over the past ten years or so – above all in garden ponds, but increasingly also on façades, on roofs and on outdoor surfaces. Several experts attribute this to the rising temperatures and the increase in humidity in our latitudes.

Green algae
Green algae occur in fresh water, but also in the sea and on land (on tree bark, for example). The presence of green algae indicates an elevated phosphate or nitrate level in the paved surface – and hence an excessive moisture content.

Black algae
Black algae are a form of the algae described above.

Mosses
Mosses have no roots but rhizoids (cell filaments), which is why they grow only a few centimetres high. The rhizoids do not conduct water; they serve purely to hold the plant in place. The water balance of mosses is determined by the moisture of their surroundings – that is, they can only take up water from the air or from precipitation, and not from the ground, as they have no water-conducting system.

Commercially available algae and moss removers can be used to get rid of the algae. The most environmentally friendly method is scrubbing with a stiff broom, a wire brush or a scrubbing brush and plenty of water. A high-pressure cleaner can only be recommended with reservations. It does produce quick results, but smooth surfaces of setts and concrete are scratched and roughened, which allows algae and mosses to take hold better and faster afterwards.

Water-permeable drainage setts must not be hosed down with a high-pressure cleaner. The high pressure blocks the pores of the setts with sediment and plant residues, and they are then no longer permeable. Soft timber, too, does not tolerate being hosed down with a high-pressure cleaner.

1-component jointing mortar (polybutadiene binder) and
2-component jointing mortar (epoxy resin binder)

Natural weathering

With most of our jointing mortars, the formulation and the method of application (slurrying in with added water and rinsing off with water) ensure that no binder residues remain on the paving surface after jointing.
Depending on the system, a thin binder film in the µm range can remain on the stone surface after jointing with reaction jointing mortars. As a rule it is not then visible.
It may also deepen the shade of the stone or slab surface. Natural weathering and UV light, however, break the binder film down gradually and reliably.
In covered areas that are less exposed to the weather this breakdown takes longer. Very occasionally, and only where the binder film is thicker, it can take on a whitish, greyish appearance while breaking down (binder film breaking up).

As a matter of principle we recommend leaving such areas to weather naturally first. We generally advise against cleaning them chemically straight away, as this can damage the joint structure irreparably.

Cleaning

If, contrary to expectations, such areas do not weather within a foreseeable period, the binder film that is already breaking down can be cleaned gently. Our **vdw Cleaning Wipes** can be used to remove light soiling, both on the paved surface and on adjoining components or fittings. They are also suitable, incidentally, for cleaning tools.



Cement-based jointing mortar

Cement haze on freshly jointed sett or slab paving can occur if not all residues of the cement dissolved in the water are removed from the surface when washing off.
A cement haze remover can help to remove it. Before using one, however, the compatibility with the material should be checked – ideally in an inconspicuous place, because there are also paving materials that are not resistant to acid.

Please note:

Always check that a cleaning agent is compatible with the paving material before using it. Pre-wet the areas thoroughly, especially the joints.
Not all materials can be cleaned with the same agent. Ceramic tiles, split tiles, stoneware tiles, brick, clay and clinker paving, cotto as well as reconstituted stone surfaces, fair-faced and exposed-aggregate concrete and many natural stones, for example, require a different remover from polished and finely ground limestone surfaces (marble, reconstituted stone). For ground and rough limestone and reconstituted stone surfaces the agent may have to be diluted. On natural stones containing iron (e.g. Serizzo) rust can cause yellow staining. **Always consult the manufacturer of the cleaning agent before use and ask for advice on how to apply it!**

4. Accessories

Rubber squeegee



Technical Data	Art. no.
Size: 400 x 30 mm	799 004 996

Broom



Technical Data	Art. no.
Coconut fibre broom, size: 400 mm	799 013 996

Broom handles



Technical Data	Art. no.
Material: wood, size: 1600 mm x 24 mm	799 016 996

Backing rod roller



Technical Data	Art. no.
Roller width: 4 mm, insertion depth: 10 mm	799 001 996

vdw Smoothing Agent/vdw Primer



for vdw 885 plus – FugenFlex
Water-based solution for smoothing sealants.
Suitable for use on natural stone.

Pack size	Art. no.
500 ml bottle with spray head	885 701 850

Pack size	Art. no.
100 ml bottle	885 601 810

roll in vdw



PE backing rod for precisely limiting the joint height and reliably preventing three-point adhesion.

Pack size	Art. no.
100 m	885 801 810

vdw 884 – FugenBand

Joint tape for separating paving and bedding from structural elements and for dividing areas into bays.

Size	Pack size	Art. no.
10 x 100 mm	Roll of 10 m	884 001 801
5 x 100 mm	Roll of 20 m	884 002 801

vdw 886 – Broadcast Sands

For visually matching vdw 885 plus FugenFlex to the vdw synthetic resin jointing mortars

Colour	Pack size	Art. no.
natural	1 kg PE bottle	886 002 801
stone grey	1 kg PE bottle	886 003 801
basalt	1 kg PE bottle	886 004 801

Suitable tools


Double paddle mixer


Mobile mixing station


Wet and dry vacuum



Image source: BOMAG GmbH Boppard

Vibrating plate


Water hose


Adjustable spray gun


Coconut fibre broom


Rubber squeegee, single-lip


Hydro sponge float


Roller attachment


Schwammfix

5. Important notes and environmental aspects

General information

• All times given in our data sheets usually refer to 20 °C and 65 % relative humidity (high temperatures shorten these times, low temperatures lengthen them).
• Because of different minerals, binders and aggregates, colour differences between the various vdw mortar products are unavoidable.
• Colour prints in the product information are only indicative and correspond only approximately to the original colours of the vdw jointing mortars.
• Experience has shown that there are types of stone which can show discoloration after jointing. A test area should therefore always be laid. The test areas count as reference areas.
• With particularly absorbent slab paving, for example some granites and sandstones, darkening can occur as a result of rising moisture from the bedding.
• Contact with animals must be avoided during the application and curing phase.
• As a matter of principle, a strength test should be carried out before the areas are put into service.
• Chamfers must be exposed after jointing (for further information see page 24).

Cement-based products

• Varying quantities of mixing water and different moisture levels in the substrate can lead to differences in shade in the joint with cement-based mortars. This is not a quality defect.
• Protect the setting mortar from drying out too quickly (direct sunlight, draughts) and from frost and temperatures < 5 °C and > 30 °C.

Synthetic resin products

• With some types of stone, for example granite, Asian natural stones, clinker and reconstituted stone, the binder film remaining on the surface can produce particular effects such as darkening. On white or light-coloured paving this change of colour can also appear yellowish. These phenomena result from the contact between the vdw mortars and the paving surface and are not a workmanship defect.
• With critical types of stone it is therefore essential to pay particular attention to careful final cleaning.
• To reduce the remaining binder films and dark discoloration we recommend pre-treatment with **vdw 950 StoneProtect plus 3 in 1**.
• On absorbent slab and sett paving, more pronounced and longer-lasting deepening of the shade can occur at the surface, which may also be irreversible. There we recommend jointing with vdw Cement Based Jointing Mortar.
• For jointing concrete block paving with treated (impregnated, coated) surfaces we recommend vdw 840 plus 1K Jointing Mortar. The technical data sheets of the concrete product manufacturers must be observed!
• vdw synthetic resin jointing mortars are not suitable for sealing paving surfaces.
• If washing and cleaning off are inadequate, a binder film can remain on the paved surface.

Safety notes

Occupational safety:
• When using vdw mortar systems avoid contact with skin and wear safety goggles and protective gloves.
• Further product-specific information is given in the current safety data sheet for the product concerned.

Cleaning the tools:
• While still fresh, the tools can be cleaned with water or with vdw Cleaning Wipes; once cured, only mechanically.

Water hazard classes:
As individual components, liquid epoxy resins and hardeners can be toxic to aquatic organisms; this depends on the ingredients of the EP components. Detailed information can be found in the safety data sheets. Cured epoxy resins are generally not hazardous to water.

Removal and recovery:
According to current knowledge, the removal and recovery of components to which cured polybutadiene or epoxy resin adheres is not, as a rule, expected to have any harmful effects on the environment.
As cured EP systems are thermosets, no release of hazardous substances, no clogging of grinding equipment and no other adverse effects on the recycled material are to be expected during size reduction.
Because of the energy content of EP systems, thermal recovery of recycled material with correspondingly high contents is also a sensible recovery option.

Disposal:
- Do not allow cement-based products to enter the drainage system.
- Mixed and fully cured material is inert and does not require special disposal.
- Note that the material continues to cure during disposal.
- Containers emptied of residues can be disposed of free of charge through our certified contract partner. Further information on **+49 (0) 22 25 / 91 57-0**.
- Please refer to the container labelling and the safety data sheets for product-specific information.

With these notes we wish to advise to the best of our knowledge on the basis of our tests and experience. Because of the many possible applications and the storage and application conditions of our products, which are beyond our control, we cannot however accept any warranty for the work result in individual cases. Carry out your own tests. Our technical advisory service is always available at Technik@gftk-info.de. Subject to change.

No direct legal liability can be derived either from the notes in this product information or from verbal advice, unless the content of the advice is expressly confirmed by us in writing. With the publication of this product information all previous versions become invalid.

Rheinbach-Flerzheim, February 2026

Notes