

**plus Color  
vdw 400**

**Cement Based Jointing Mortar**  
For light, medium & heavy traffic loads



Cement-based, polymer-modified, rapid hardening, slurry applied, paving joint mortar for external natural stone & porcelain tile paving with light, medium & heavy traffic loads.

- Very free flowing
- Self-compacting
- Suitable for narrow joints from 3 to 25 mm
- Early pedestrian access and loading
- Compressive strength: ca 45 N/mm<sup>2</sup> (28 days)
- Impermeable
- High freeze/thaw resistance
- Excellent coloured, aesthetic finish

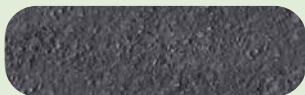
**Colours:**



Sand Beige



Grey



Anthracite

**‘Perfect for Porcelain  
&  
Natural Stone Paving’**



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# Product and Application Information

**GftK vdw 400plus Color** is an outstanding, coloured, polymer modified, cement-based, rapid-hardening, impermeable paving joint mortar. It is quick and easy to apply because this formulation allows the most efficient and effective use of wet slurry application. This provides optimum self-compaction into the joints, with an excellent finish, and no additional tooling required. The resulting higher strengths and better joint performance characteristics, also significantly increase resistance and long-term durability.

**GftK vdw 400plus Color** is designed for professional users only. It is suitable for jointing most types and sizes of natural stone and concrete paving, as well as being ideal for external porcelain tile paving. The high strength and performance characteristics, mean it can be used in all types of external areas, and with light to heavy traffic loadings. Therefore, it can provide long-term durability with many different types of paving in domestic gardens and driveways, around retail and commercial developments, as well as in town centres, and other local authority and public areas.

## Key Advantages include:

- Very free flowing
- Self-compacting
- Suitable for narrow joints from 3 mm, up to 25mm wide
- Aesthetic, stable, coloured finish
- Early pedestrian access and loading
- Compressive strength of 45 N/mm<sup>2</sup>
- Non-permeable / impermeable
- High freeze / thaw resistance

## Colours:

Sand Beige



Grey



Anthracite



**Colour notes:** Differences in colour between different vdw mortar products and batches are sometimes unavoidable due to the natural mineral ingredients. Colour reproductions in print and on screen, are also only an indication, as colour is limited by the processing technologies.

## Technical Performance and Values

**Base:** Cementitious (low-chromate to TRGS 613)

**Aggregate grading & granulometry:** Particle size: 0.1 – 0.5 mm

**Density:** ca. 2,0 kg/litre (hardened)

### Compressive strength:

After 24 hours ca. 10 N/mm<sup>2</sup>

After 7 days ca. 35 N/mm<sup>2</sup>

After 28 days ca. 45 N/mm<sup>2</sup>

**Water permeability:** Non-permeable.

**Water to be added:** 4.5 – 5.0 litres per 25 kg bag.

**Pot life:** ca. 15 minutes at 20°C after mixing.

**Ambient and substrate temperature:** > + 5 °C, max. + 25 °C

**Packaging:** 25 kg bags

**Storage life:** 9 months stored in cool, dry & frost-free conditions.

## Application

### Site Conditions, Requirements and Limitations:

**Site requirements:** A stable, load-bearing substructure, as well as the paving bedding layer, must all be correctly designed and installed to fully support and accommodate the anticipated traffic loads. Where relevant, design and installation to be in accordance with the requirements of BS 7533.

The paving should be laid with suitable falls to facilitate surface drainage, which typically is with a slope of 1 in 80 for natural stone paving, and 1 in 60 for external porcelain tiles.

**Environmental conditions:** The ambient, surface, and material temperatures, should all be within min. 5 °C and max. 25 °C.

**GftK vdw 400plus Color** should not be applied in wet and rainy conditions, where we would generally recommend GftK's 2-part epoxy resin based paving joint mortars (**GftK vdw 850plus Color** and **GftK vdw 815plus Color**).

**Limitations:** **GftK vdw 400plus Color** is not designed to absorb or compensate for any settlement or other ground movement in the substructure.

When there are structural movement expansion joints in or around the substructure, these must be brought through the paving and sealed. NCC Streetscape specialists can advise on suitable elastic joint sealants.

### Paving joint dimensions:

**Joint Width:** Continuous min. 3 mm, max. 25 mm.

**Joint Depth:** For natural stone setts / cobbles (small format paving < 300 x 300mm) and all areas with vehicle traffic, depth should be 40 mm or the full depth of paving elements. The mortar joints should also be the full thickness of the paving, e.g., min. 20mm, for external porcelain tiles (i.e., the full depth of external porcelain tiles), and the same for typical modern natural stone paving (which is typically now only 20-25 mm thick). For thicker paving and joints that are continuously wider than 15mm, then the depth should be twice the width (i.e., min. 30mm).

**Tools:** A suitable knife, a good quality hard rubber squeegee, a coconut fibre brush, cleaning sponges, plus a water hose with spray nozzle for control. On larger areas use washboy-type grout cleaning equipment. Tools and equipment should be cleaned frequently with water, both during and after use.

**Test areas:** On some types of highly absorbent and sensitive paving, **GftK vdw 400plus Color** (and any other cement slurry materials), can make the surfaces appear darker or discolour. This is why we recommend a test on an inconspicuous area before overall use. However, if staining does occur, this will reduce with normal weathering over time and is not a defect or any shortcoming in the product. Variations in paving moisture levels can also lead to shade differences in cement mortars until completely dry, which again is not a defect.

**Health and Safety:** Contains cement, so avoid contact with skin and wear safety goggles and protective gloves. Keep away from children. Avoid animal contact (including aquatic life) during the application and curing periods. Please also refer to the MSDS (materials safety data sheet), which is available to view and / or download from the Product Page on our website.

**Ecology:** As with all cement mortars, keep out of the drainage system. Mixed, cured material is inert and does not require special handling or disposal. Allow to harden before disposal. More information can also be found on the product labels, and material safety data sheets (MSDS).





## Consumption:

The **GftK vdw 400plus Color** consumption figures given in the Consumption Table below are calculated for a joint depth of 10mm and must be multiplied by the actual depth of the joint for your project i.e. for 20mm joint depth, multiply by x2, and for 30mm joint depth multiply by x3 and so on.

**Loss and wastage:** There are no allowances included for loss or wastage in this table, and this should be added. Professionals usually add around +10%, according to the site situation.

**Note:** This consumption table refers to areas of both smaller format paving (generally regarded as <300 x 300mm), and larger format paving (typically >400 x 400mm). The uneven shapes and profiles of smaller format natural stone setts / cobbles with cropped or riven edges, as well as different paving designs or laying techniques, can also lead to variations in consumption.

|  | Paving Dimensions in mm |        | Approx. kg/mm <sup>2</sup> per 10mm depth, for joint widths |      |      |      |
|--|-------------------------|--------|---|------|------|------|
|  | Width                   | Length | 3mm   | 5mm  | 10mm | 15mm |
| <b>Larger Format Paving</b><br>(eg slabs)  | 900                     | 600    | 0.17  | 0.28 | 0.55 | 0.82 |
|  | 600                     | 600    | 0.20  | 0.33 | 0.66 | 0.98 |
|  | 600                     | 400    | 0.25  | 0.41 | 0.82 | 1.21 |
|  | 400                     | 400    | 0.30  | 0.49 | 0.95 | 1.45 |
|  | 300                     | 300    | 0.40  | 0.66 | 1.29 | 1.90 |
|  | 200                     | 200    | 0.59  | 0.98 | 1.90 | 2.79 |
| <b>Smaller Format Paving</b><br>(eg setts) | 200                     | 100    | 0.88  | 1.44 | 2.77 | 4.00 |
|  | 160                     | 180    | 0.70  | 1.15 | 2.23 | 3.25 |
|  | 140                     | 180    | 0.75  | 1.23 | 2.39 | 3.47 |
|  | 120                     | 160    | 0.86  | 1.41 | 2.71 | 3.94 |
|  | 100                     | 120    | 1.07  | 1.75 | 3.36 | 4.83 |
|  | 100                     | 100    | 1.17  | 1.90 | 3.64 | 5.22 |

**Further estimating assistance:** There is also a **Consumption Calculator** on the **Product Page** of our website. Below is a – **QR Code** – Your Easy Link to this **Product Page**. For any specific assistance call NCC Specialists on **01257 266696**.

## Preparation and Application Process

**Summary:** The following is an outline, and we strongly recommend that users read the separate **GftK vdw 400plus Color - Application Guidelines**, which contains helpful advice and practical tips. Most importantly, we strongly recommend that you watch the **GftK vdw 400plus Color** - Video Guides before use. These are available to view / download on our website.

**Site Cleaning and Preparation:** Ensure the paving is stable with no loose elements and that the joints are clear and correctly dimensioned. Clean the surfaces of the paving to remove any bedding residues and loose materials. Check the minimum joint depth and adjust as necessary. Tape over and protect drains and drainage gullies to prevent entry of the cement mortar. Tape and protect any adjacent areas not being jointed.

**Prewetting / wetting:** The amount of wetting required is dependent on the type and porosity of paving and the site conditions i.e. wind, direct sun, temperature etc. We recommend wetting very porous paving elements the previous day, or pre-sealing with a suitable impregnation (e.g., **GftK 950 3-in-1 Seal & Protect**). Then, immediately prior to application, the surfaces must be thoroughly soaked to saturation again. Before applying **GftK vdw 400plus Color**, always check to ensure there is no surface ponding or residual standing water in the joints.

**Mixing:** For a 25 kg bag, pour 4.5 – 5.0 litres of clean cold water, into a forced action mixer, or a suitable sized clean container for mixing with a paddle mixer. Add 25 kg of the product

directly from the bag and mix for ca. 2 mins to obtain a smooth, homogenous, pourable mortar, then leave to stand for a further ca. 2 mins and mix again briefly for ca. 30 seconds.

**Grouting the joints:** Pour the mortar onto the pre-wet paving surfaces, spread evenly across the surface using wet-slurry techniques with a rubber squeegee. We recommend filling the joints from the highest to the lowest points. Work the mortar diagonally across and into the joints, ensuring they are fully filled. Top up as you go and strike-off surplus mortar with the squeegee. Leave and allow to stiffen. All as shown in the videos.

**Cleaning:** After an initial hardening time of about 15 to 25 minutes at 20°C, begin the cleaning process. Clean the paving diagonally to the joints using wet sponges, using a washboy machine for larger areas. Use a coconut-fibre brush with a hose and fine water spray to remove residual mortar from the surfaces – work carefully, without brushing mortar out of the joints. Finally, clean the paved surface again with clean sponges using the same procedure, and rinse the surface to finish.

**Note:** Do not allow mortar to fully harden on the paving surface, or it can only be removed mechanically, or by chemical cleaning (do not use brick acid - refer to NCC for any cleaning advice).

**Curing and Hardening:** Timings in this PDS relate to a temperature of 20°C and 65% RH (relative humidity), higher temperatures will shorten, and lower temperatures will increase these times. Protect the freshly applied mortar from direct sun, wind, frost, and temperatures < 5°C and > 25°C until hardened.

**Protection:** Prevent any access for at least 4 – 6 hours, and then allow only limited pedestrian traffic. Protect from heavy rain for at least 12 hours. Do not lay protective sheeting directly on the surface, always provide ventilation underneath. Areas are usable by pedestrians after 24 hours, and by limited light wheeled traffic after 48 hours. Areas can be fully loaded after 7 days.

**Note:** A simple pressure strength test should be carried out before putting the area into any service.

**Maintenance in service:** Fully hardened **GftK vdw 400plus Color** can be cleaned by high-pressure water jetting at the same time as the paved surfaces are cleaned. The joints should not be cleaned with brick, or any other strong acids, or bleach such as sodium hypochlorite-based cleaners, which can all adversely affect and/or stain the jointing, as well as damaging the paving elements. For safe and efficient cleaning, we recommend the NCC range of non-staining paving cleaning solutions.

QR Code for the **GftK vdw 400plus Color** Product Page



**Legal:** No direct legal liability can be assumed based on the data in this product information sheet or from any verbal advice unless this verbal advice is expressly confirmed by us in writing.

## Contact:

Our General Conditions of Sale and Supply apply. This Data Sheet replaces all previous versions.

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