QV 1000

Expansive grouting mortar/concrete

quick-mix
A trademark of sievert

Rapid-hardening expansive grouting mortar/concrete for extreme dynamic and static loads

Exterior plaster acc. EN 1504-6
C 50/60 according to DIN EN 206 / DIN 1045-2
C 50/60 according to DAfStb directive

- high frost and de-icing salt-resistance (proof by CDF process)
- consistency: free-flowing
- expansion rate: ≥ 0.1%
- compressive strength:
  ≥ 40 N/mm² (24 h) Class A
  ≥ 55 N/mm² (7d)
  ≥ 60 N/mm² (28d)

APPLICATIONS

- for concreting-in machinery, crane rails and bridge bearings
- according to DAfStb regulation “Manufacture and use of cement-bonded grouting concrete and cement” (VeBMR)
- product according to DIN EN 1504-6 “Anchoring of rebar”
- casting thickness:
  QV 1000-1: ≤ 25 mm
  QV 1000-4: 10-100 mm
  QV 1000-8: 30-200 mm
- for grouting fastening bolts and steel built-in components in concrete
- for sealing joints between prefabricated components and concrete as well as openings and recesses in concrete
- for external and interior use

PROPERTIES

- rapid hardening
- free-flowing
- shrink-free
- impermeable after hardening
- frost and de-icing salt-resistant
- due to its final strength, suitable for extreme dynamic and static loads

COMPOSITION

- high-quality binders according to DIN EN 197-1
- Mineral aggregates according to DIN EN 13139 / DIN EN 12620 (alkali sensitivity class EI)
- Admixtures according to EN 934-2 and/or EN 934-4 as well as with abZ
- chloride-free

SUBSTRATE

Pretreatment	■ Clean the substrate. Remove loose parts, dust, cement slurry, oil and grease. ■ Pre-wet substrate thoroughly, but prevent puddles from forming.

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PROCESSING

Temperature	■ Do not process or allow to dry out at air, material or substrate temperatures below +5°C, or if there is a risk of exposure to night frost, or at temperatures above +30°C, or in direct sunlight, or on heated up surfaces, and/or in windy conditions.
Mixing / Preparation / Processing	■ QV 1000 as a complete container, depending on the grain size, mix with approx. 3.25 - 3.75 litres of clean water in a compulsory mixer or with a counter-rotating double agitator in the mortar tub. Put about 4/5 of the water in the mixer, then add the sack contents of 25 kg of dry mortar and mix for about 2 minutes (the kneading effect activates the superplasticiser). Add the remaining water and mix for another 2 minutes until a lump-free flowable consistency is achieved. For larger quantities, a mixing pump with continuous mixer can also be used for grain sizes of 0 - 1 and 0 - 4 mm. With the grain size 0-8 mm, it is possible to work with a piston pump or an open mortar pump. ■ For machine processing, ask for our technical advice
Applying	■ The mortar must be poured without cavities and without any work interruption. Make sure it is de-aerated when doing so. ■ The formwork must be tight and non-absorbent as far as possible. ■ QV 1000 is used for the following grouting heights and grouting widths depending on the grain size: QV 1000-1 (grain size 1 mm): 0 to 25 mm QV 1000-4 (grain size 4 mm): 10 to 100 mm QV 1000-8 (grain size 8 mm): from 30 mm
Processing / Working time	■ approx. 60 minutes ■ Different temperatures influence the setting and hardening process.
Drying / Hardening	■ The applied mortar is to be post-treated according to DIN EN 13670 / DIN 1045-3. ■ Protect the fresh mortar from drying out too quickly and from unfavourable weather conditions such as frost, draughts, direct sunlight and direct exposure to driving rain if necessary by hanging with foil.
Cleaning the tools	■ Clean all tools and equipment with water immediately after use.
Notes	■ Cement and cement-bonded building materials may, under certain conditions, cause a solvent attack on non-ferrous metals such as aluminium, copper or zinc in the area of the bonding. ■ The specifications and guidelines issued by the building element manufacturer are to be taken into account.

PACKAGING

■ 25 kg/sack

STORAGE

■ Low-chromate for at least 12 months from date of manufacture if stored dry and properly in original sealed package.

QUANTITY REQUIRED / YIELD

■ consumption: approx. 19 kg/m² per 10 cm layer thickness
■ yield: app. 13 l fresh mortar per 25 kg/sack

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TECHNICAL DATA

Compressive strength (class)	C50/60 according to DIN EN 206 / DIN 1045-2 and DafStb directive
Exposure classes	XC4, XF4, XA2, XM2, XD3, XS3 according to DAfStb directive and DIN EN 206 / DIN 1045-2
Moisture class according to DAfStb Alkali Guideline	WO, WF, WA according to DAfStb directive and DIN EN 206 / DIN 1045-2
Compressive strength	after 24 hours (+5 °C) ≥ 5 N/mm² after 24 hours (+30 °C) ≥ 40 N/mm² after 7 days ≥ 55 N/mm² after 28 days ≥ 60 N/mm² after 56 days ≥ 65 N/mm² after 91 days ≥ 70 N/mm² N/mm²
Grain	0 – 1 mm, 0 – 4 mm, 0 – 8 mm
Processing temperature	+5°C to +30°C
Water requirement	ca. 3,25 – 3,75 l per 25 kg/sack
Flow dimension class	Grain size 0-1 mm: Class f2 according to DAfStb directive Grain size 0-4 mm: Class f2 according to DAfStb directive
Outflow dimension class	Grain size 0-8 mm: Class a2 according to DAfStb directive
Shrinkage class	Grain size 0-1 mm: Class SKVM III according to DAfStb directive Grain size 0-4 mm: Class SKVM III according to DAfStb directive Grain size 0-8 mm: Class SKVB II according to DAfStb directive
Swelling dimension after 24 hours	≥ 0.1 % by vol.

All data are average values that were determined under laboratory conditions according to relevant test standards and application tests. Deviations are possible under practical conditions.

SAFETY AND DISPOSAL INSTRUCTIONS

Safety	■ This product produces an alkaline reaction when it comes into contact with moisture/water. Therefore ensure that skin and eyes are protected. If it should come into contact with the skin or eyes, rinse them thoroughly with water. See a doctor immediately if it comes into contact with the eyes. ■ Follow further instructions in the safety data sheet.
GISCODE	■ ZP1 (products containing cement, low-chromate)
Disposal	■ Dispose of the material in accordance with the official regulations. ■ Completely empty and recycle the packaging. ■ Dispose of hardened product in accordance with the local regulations. Do not allow to enter the sewer system. Dispose of the hardened product in the same way as concrete waste and slurries. Waste code according to the Ordinance on the European Waste Catalogue depending on the origin: 17 01 01 (concrete) or 10 13 14 (concretewaste and concrete slurries).

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GENERAL INFORMATION

This information sheet provides only general recommendations. Should you have any queries relating to a specific application, please contact our technical sales advisor or call our hotline: +49 541 601-601. Since natural raw materials are used, the values and properties described may vary somewhat. All of the details given are based on our current knowledge and experience and on the assumption that the materials are professionally applied and used for their normal purpose. All of the details are non-binding and do not release users from their duty to undertake their own tests to ensure suitability for the intended application. Due to the effects of different weather, processing and construction site conditions, no guarantee can be given for the general validity of all details. We reserve the right to make changes as a result of further development of the product and applications engineering. The general rules for construction engineering, the valid standards and guidelines, and the technical working guidelines must be observed. The publication of this technical data sheet renders all previous editions of this data sheet void. Please obtain the latest information from our website.