







## I. Product description

Cold-curing, two-component resin mortar consisting of a modified, aldehyde-free furan resin and a carbon-based filler. The mortar offers outstanding temperature resistance with simultaneous resistance to hydrofluoric acid.

## II. Application and properties

With lower shrinkage than conventional furan resin mortars, the mortar is suitable for bricklaying and jointing tiles, bricks and shapes made of ceramic or carbon. For coverings and linings with high thermal and inorganic chemical loads, such as quench or venturis.

-  outstanding temperature resistance up to 280 °C
-  good chemical resistance (resistant to hydrofluoric acid)
-  low shrinkage
-  black
-  electrically conductive
-  long shelf life of the components (even at higher storage temperatures)

## III. Physical Data

Property [unit], Test method	Value
Density [g/cm <sup>3</sup> ], DIN EN ISO 1183-1, ASTM D 792	1.5
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579	> 40*
Flexural strength [MPa], DIN EN ISO 178, ASTM C 580	20*
Dissipation resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	≤ 10 <sup>6</sup>
Tensile Strength [MPa], DIN EN ISO 527, ASTM C 307	10*
Shore D hardness, DIN 53505, ASTM D 2240	> 70
Adhesive strength to ceramic bricks [MPa], DIN EN ISO 4624	2
Adherence to carbon bricks (MPa), DIN EN ISO 4624	> Inherent tensile strength
Temperature resistance [°C] short-term	350
- permanent	280
Data are mean values *after heat treatment	

## IV. Chemical Resistance

+ = resistant at 20 °C

(+) = short time resistant

- = not resistant

## Substances

### Acids

Chromic acid 10 % $\text{CrO}_3$	(+)
Acetic acid 100 %	+
Hydrofluoric acid 50 %	+
Oleic acid	+
Phosphoric acid 85 %	+
Nitric acid 5 %	+
Hydrochloric acid 37 %	+
Sulfuric acid 70 % at 100°C	+

### Alkalis

Sodium hydroxide solution, potash lye 50	(+)
--	-----

### Solvents

Acetone	(+)
Ethyl acetate	(+)
Isopropanol	+
Methanol/Ethanol	(+)
Mineral oils	+
Petrol	+
Toluene/Xylene	(+)
Trichlorethylene	-

### Other

Hydrogen peroxide 30 %	-
------------------------	---

## V. Preconditions

Uneven spots should be levelled in the substrate already. Do not apply the mortar directly to the substrate! If the substrate is not provided with a surface protection system, apply with a suitable primer and sprinkle if necessary. Please contact our Application Technology Department for possible solutions.

Usually the mortar is applied onto CRS coating systems or rubber linings.

## Requirements

Processing temperature	approx. 10–30 °C
Dew point distance	> 3 K
Dew point distance from 70% air humidity	> 5 K

Optimal temperature is 20 °C. Higher and lower temperatures influence the pot life and consistency of the mixtures.

Avoid draughts and solar radiation.

Curing is considerably delayed below 15 °C!

## Steel

Refer to DIN EN 14879-1.

The steel surface shall be sandblasted to a metallic bright finish. A preparation degree of SA 2 ½ as specified in DIN EN ISO 12944-4 and a roughness grade "medium (G)" as specified in DIN EN ISO 8503-1 must be achieved; minimum surface roughness Rz = 70 µm. After blasting, the formation of new rust must be prevented by suitable measures, e. g. priming directly.

## Moisture

During application, the substrate must remain dry. No moisture (condensate, mist) may enter in open joints, onto the bedding joint or the undersides and edges of tiles.

## Alkaline bedding compound

If the mortar comes into contact with alkaline bedding compounds (as with water glass mortar), they must be hardened, acidified and dried.

20 % alcoholic sulphuric acid is suitable for acidification, which can be supplied via CRS or mixed individually: 20 wt. % water, 20 wt. % sulphuric acid (96%) and 60 wt. % alcohol (isopropyl alcohol/ethanol or methylated spirit). It can also be acidified with 20% aqueous sulphuric acid. However the drying will be slower.

**WARNING! Start with water when mixing! Add the acid slowly whilst stirring. Heat development! Observe safety measures!**

## VI. Components

All components must be stored and transported dry. The minimum storage life applies to a storage temperature of 20 °C, unless otherwise specified. Higher temperatures reduce, lower temperatures increase the minimum shelf life.

Component	Item number	Package	Content	Shelf life
Dolit-788+-Solution	5233325001	Hobbock	25 kg	24 Months
Dolit-788+-Powder	5233048021	Bag	15 kg	24 Months
Dolit-Universal-Cleaner	5240023005	PE Canister	4 kg	24 Months

For handling, transport and storage observe the relevant safety data sheets.

## VII. Mixing ratios, mixing sequence and consumption

### Dolit 788+

Component	l / batch	kg / batch	Consumption kg / liter
Dolit-788+-Solution	0.855	1.000	0.577
Dolit-788+-Powder	2.254	1.600	0.923
<b>Total</b>		<b>2.600</b>	<b>1.500</b>

A reserve of 10 % is to be added to the calculated project requirements for butt joints and butt joints.

Consumption per mm thickness in kg/m<sup>2</sup> (approx.): 1.500

Batch yields in l (approx.):

1.7

### Mortar requirement per m<sup>2</sup> (approx.)

Split tiles 240 x 115 x 20 mm	7.5 l	11 kg
Split tiles 240 x 115 x 40 mm	9.5 l	14 kg
Bricks 240 x 115 x 65 mm	11.5 l	17 kg
Bricks 240 x 115 x 80 mm	13 l	19 kg
By filled-joint installation (bedding joints 5 mm / butt joints 7 mm)		

## Joint dimensions (in mm)

Bed joint thickness	4–7
Joint width	4–8
Depth of joints by hollow joint installation	min. 15

1 liter material spread over 1 m<sup>2</sup> is always 1 mm thick.

## VIII. Application, pot life

- 🔗 Processing may only be started when the conditions specified in chapter "Application requirements" have been met.
- 🔗 If the materials cannot be processed at optimum processing temperatures of approx. 10-30 °C, they must be cooled or heated to 20 °C.

Curing is considerably delayed below 15 °C!

### Pot life

The pot life at a material temperature of 20 °C approx. 30–50 minutes.

Higher temperatures reduce, lower temperatures extend the pot life.

### Mixing sequence

1. Stir the mortar solution well before use with the mortar whisk (also for partial removal). Then measure or weigh the solution and transfer to a mixing vessel.
2. The materials are mixed in a mixing vessel with a drilling machine and mortar whisk at 300-500 rpm. Lead the whisk along-side wall and bottom of the vessel until a homogeneous mixture is obtained.
3. Solids are individually measured or weighed, added to the solution in portions and stirred in as described until a lump-free mixture is formed.

Small amounts can be mixed by hand. Do not use the mortar after the pot life has elapsed!

### Dolit 788+

The mortar is applied to tiles and bricks without cavities (filled joint installation). The bedding joint should be 4-7 mm thick.

To compact the butt joint, press excess material over the edge of the joint with the joint trowel and then remove the remains with a brick trowel.

Smooth the joints before curing. For this purpose, a joint trowel is wetted with Universal Cleaner.

Fresh mortar residues on the tile surface can be removed with Dolit-Universal-Cleaner.

## IX. Working Equipment

Measuring cup, balance, mixing vessels, drilling machine, mortar whisk

Mortar mixing machine, trowel, smoothing tool, jointing iron, paint brush

## X. Reworking, repairs, connections

### Rejointing

When rejointing, the joint depth must be at least 5 mm. Press the mortar into the clean joints with a joint trowel and smooth.

### Replacement of hollow tiles or bricks

Cut with a separating disk straight through to the mortar bed into the joints and the bricks or tiles.

Where the lining consists of two brick layers choose the area to be removed big enough so that the bricks can be broken out from the upper brick layer down to the sealing layer in a stepped manner.

Cut carefully in the area of the mortar bed so that the sealing layer is not damaged. Remove the bricks using a caulking tool. Take care that the sealing layer is neither mechanically damaged nor detached from the substrate.

After removing the tiles or bricks, the new construction is carried out (see "Application").

## XI. Cleaning

- Tools soiled with uncured materials can be cleaned with Dolit-Universal-Cleaner. Only clean in well ventilated areas.

## XII. Waiting and curing times

Temperature	Minimum time to walkability (approx.)
20 °C	24 h

The finished coating is fully chemically resistant at 20 °C after 7 days.

## XIII. Safety and Disposal

- sufficient aeration and de-aeration (especially in tanks and pits)
- no smoking/no fire
- refer to the safety data sheets.
- observe hazard warnings and safety instructions on labels.
- wear required personal protective equipment (avoid skin contact with materials).
- clean and protect hands with skin protective soap and skin protection cream (no solvents).
- wear a dust mask when grinding (e.g. for repairs).
- operating instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany).
- accident prevention regulations by the Liability Insurance Association for the Chemical Industries (Germany).

Avoid direct contact of the materials with the flame, especially during welding work (welding beads) on site.

Preferably consume residual quantities. Do not pour into a spout or dustbin! Collect separately for disposal in durable, lockable and labelled containers.

## XIV. GISCODE

Product	GISCODE
Dolit 788+	SB-F 30

All information contained in this Product Information sheet is based on the present state of our knowledge and practical experience. All data are approximate values for guidance only. A legally binding warranty of certain characteristics or the suitability for a certain purpose of use cannot be derived from this.

The information given in this Product Information sheet is our intellectual property. The material sheet may neither be copied nor used by unauthorized parties, nor professionally distributed or otherwise made accessible to third parties without our prior consent.

This issue replaces all previous versions.