

PRODUCT INFORMATION

ESKANOL VE-L MORTAR

PRODUCT DESCRIPTION

ESKANOL VE-L MORTAR is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with carbon fillers.

SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL VE-L MORTAR** consists of the **ESKANOL VE SOLUTION 350**, the **ESKANOL M50 HARDENER** and the filler **CARBON FILLER**.

FIELDS OF APPLICATION

ESKANOL VE-L MORTAR is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals, along with high temperature and heavy mechanical loads.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines. Furthermore, **ESKANOL VE-L MORTAR** is suitable for the areas, where sparking shall be avoided due to the possible risk of explosion.

FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and many organic compounds
- Short curing time
- Can be built up as a conductive mortar

CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN TR 55684 and EN ISO 8502.

Non-alloyed steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A surface preparation degree of SA 2½ (SSPC-SP 10; NACE No. 2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-2 must be achieved. The primer must be applied immediately after the blasting.

CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

Sealing layers, except UP or VE based surfaces, shall be primed with VE primer before mortar application. **ESKANOL VE-L MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

MIXING RATIO

Pour **ESKANOL VE SOLUTION 350** in a mixing vessel and add certain amount of **ESKANOL M50 HARDENER** with the specified mixing ratios, then stir well.

Add the **CARBON FILLER** with the specified mixing ratios and mix further.

For use on vertical surfaces, up to 5 parts by weight of **STEWATHIX 100 / 500** can be added to the mortar.

The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved.

As a primer, the resin-hardener mixture with the specified mixing ratio (**ESKANOL VE SOLUTION 350 + ESKANOL M50 HARDENER**) is used without adding the **CARBON FILLER** and with broadcasting quartz sand (0.7 - 1.2) while still wet.

Product	Parts by Weight	Parts by Volume
ESKANOL VE SOLUTION 350	100	3.00
ESKANOL M50 HARDENER	2	0.06
CARBON FILLER	150	8.10

ESKANOL VE-L MORTAR

CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m ²]
Tiles	240 x 115 x 20	ca. 13
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 21
Bricks	240 x 115 x 80	ca. 23

POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL VE-L MORTAR	ca. 40	ca. 30	ca. 20

CURING (20°C)

Load Capacity	Time
Accessible	ca. 4 h

CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the

legal requirements for handling hazardous materials must be observed.

PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL VE LÖSUNG 350	25 kg	10638
ESKANOL VE LÖSUNG 350	205 kg	10637
ESKANOL M50 HARDENER	1 kg	10098
ESKANOL M50 HARDENER	5 kg	10097
ESKANOL M50 HARDENER	10 kg	10096
ESKANOL M50 HARDENER	25 kg	10095
CARBON FILLER	25 kg	590 9120
STEWATHIX 100	10 kg	10376
STEWATHIX 100	1,8 kg	10377
STEWATHIX 500	10 kg	10374
STEWATHIX 500	1,8 kg	10375
ESKANOL CLEANER	14 kg	10002
ESKANOL CLEANER	155 kg	10000

STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL PO-L POWDER	-	24 Months
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL M50 HARDENER	5 - 20°C	6 Months
ESKANOL VE SOLUTION	5 - 20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN EN ISO 1081	Ω	≤ 10 ⁶
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm ³	1.9
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm ²	85
Adhesion Strength	DIN EN ISO 4624	N/mm ²	≥ 2.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 ⁻⁶
Max. Operating Temperature Liquids	-	°C	+120

Note: The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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