

Product Information

Dolit^{LF}

BL.FU.001 | 09/02/2022



PRODUCT GROUP

Coatings Laminate

BINDER BASE

Furan resin

PROPERTIES / APPLICATION

Crack-bridging laminate system based on a modified furan resin for application on primed steel and concrete surfaces or on a **Dolit acid protection membrane**.

Wide applicability as a coating system with high chemical resistance, especially to acids, alkalis and solvents (as well as hydrocarbons).

- Temperature resistance
 - Up to 60 °C on concrete.
 - Up to 100 °C on steel (direct exposure on laminate without overlying tile or brick flooring).
 - The temperature resistance is basically dependent on the individual chemical stress.
- Very high chemical resistance to a wide range of media, such as various inorganic and organic acids and alkalis, greases, oils and fuels, solvents and various hydrocarbons.
- Can be used inside buildings or outdoors.
- Depending on the requirements, **Glass-Fibre-Mats 300 g/m²** can also be used instead of the **Glass-Fibre-Mats 450 g/m²**.
- Electrically conductive adjustable by using **Dolit-Hybrid-Fleece 20L**.

SYSTEM DESIGN

On concrete

- Dolit 848 Primer
- **Dolit VE Barrier layer [▶ 4]**
- Dolit-Filler 16 - Sprinkling
- **Dolit FN Scraper Coat [▶ 4]**
- **Dolit LF Laminating-Solution [▶ 5]** (2 **Glass-Fibre-Mats** + **Glass-Fleece**)

On steel

- 2 x **Dolit VE Barrier layer steel [▶ 5]**
- **Dolit LF Laminating Solution Steel [▶ 6]** (2 **Glass-Fibre-Mats** + **Glass-Fleece**)

The coating can be made conductive by using **Dolit-Hybrid-Fleece 20L** instead of **Glass-Fleece**.

Standard thickness on concrete approx. 3 mm, on steel approx. 2 mm.

PHYSICAL DATA

Physical property	DIN	ASTM	Value	Unit
Shore D hardness	DIN 53505	ASTM D 2240	> 60	Shore D
Adhesive strength to steel	DIN EN ISO 4624		> 2	MPa
Adhesive strength to concrete/screed	DIN EN ISO 4624		> EZF	MPa
Electr. leakage resistance (when using the Dolit Hybridvlies 20L)	DIN EN 14879-3 At >70% relative humidity	ASTM F 150/98	≤ 10 ⁶	Ω

EZF = Inherent tensile strength

PRECONDITIONS

The substrate, ambient air and Dolit materials must be in the temperature range between 15 °C and 30 °C during application. The optimum processing temperature is 20 °C. Higher and lower temperatures affect the working time and consistency of the composition. Consumption and application performance may change as a result.

During application, the substrate must be kept absolutely dry. No moisture (condensate, mist, etc.) may get onto the surfaces to be protected.

Unevenness must already be levelled out in the substrate.

Distance to dew point has to be at least 3 K, at a relative humidity of above 70 % at least 5 K.

The construction site must be protected from draught and direct sunlight.

CONCRETE / SCREED

Refer to DIN EN14879-1.

The substrate must be pretreated to achieve sufficient adhesive tensile strength. It must be free from cement slurry, cement skin, loose and friable parts, structural defects and separating substances.

The residual moisture of cementitious substrates must not exceed 4 %.

The effect of water or water vapour pressure on the back of the coating/lining must be prevented.

STEEL

Refer to DIN EN14879-1.

The steel surface is blasted to near white blast cleaning. A surface cleanliness of Sa 2½ according to DIN EN ISO 12944-4 and the roughness grade "Medium (G)" according to DIN EN ISO 8503-1; minimum surface roughness R_z = 70 µm must be achieved. After blasting, the reformation of rust must be prevented by suitable measures.

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DELIVERY FORM / BEST BEFORE DATE

Component	Item no.	Quantity	Package	Months
Dolit-848-Solution	5235290001	25 kg	Hobbock	24
Dolit-848-Hardener	5235288017	12.5 kg	Bucket	24
Dolit-VE-Accelerator	5232001023	2.5 kg	Can	24
Dolit-VE-Hardener	5232002007	1 kg	Bottle	12
Dolit-VE-Solution	5232003001	25 kg	Hobbock	6
Dolit-FN-Solution	5233007001	25 kg	Hobbock	24
Dolit-FN-Powder	5233036021	15 kg	Bag	24
Dolit-LF-Solution	5233015001	25 kg	Hobbock	24
Dolit LF Hardener *	5233014003	5 kg	Canister	24
Glass-Fibre-Mat 450 g/m ² W=127cm L=80m	9300900388	102 m ²	Roll	unlimited
Dolit-Filler 15	5211202001	25 kg	Bag	24
Glass-Fleece 30 g/m ² W=100cm	9300900089	250 m ²	Roll	unlimited
Dolit-Hybrid-Fleece 20L	5219020003		Roll	unlimited
Cab-O-Sil TS 720	5011016044	0.5 kg	Bag	24

* **Dolit-LF-Härter** must be stored and transported above 15 °C.

- All components must be stored and transported in a dry place.
- The minimum shelf life applies to a storage temperature of 20 °C. Higher temperatures shorten, lower temperatures extend the minimum shelf life.

Safety notice

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

GISCODE

Product	GISCODE
Dolit 848 Primer	RE80
Dolit VE Primer	SB-STY20
Dolit FN Scraper Coat	SB-F30
Dolit LF Laminate	SB-F30

MIXING RATIO / CONSUMPTION

CONCRETE

PRIMER

Dolit 848 Primer

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-848-Solution	0.200	100	2.000	1.800
Dolit-848-Hardener	0.100	50	1.000	1.000
Total	0.300	150	3.000	

Area per batch	≈ 10 m ²
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Dolit VE Barrier layer

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-VE-Solution	0.281	100	2.180	2.000
Dolit-VE-Accelerator	0.006	2	0.045	0.045
Dolit-VE-Hardener	0.007	2.5	0.055	0.055
Cab-O-Sil TS 720	0.006	2	0.045	0.900
Total	0.300	106.5	2.325	

Area per batch	≈ 7.75 m ²
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Sprinkling Dolit-Filler 15

Component	kg/m ²
Dolit-Filler 15	0.500

SCRAPER COAT

Dolit FN Scraper Coat

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-FN-Solution	0.720	100	2.000	1.650
Dolit-FN-Powder	1.080	150	3.000	4.300
Total	1.800	250	5.000	

Area per batch	≈ 2.6 m ²
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NOTE!

The addition of Dolit-FN Powder can be varied by up to 10%.

LAMINATE

Glass-Fibre-Mat 450 g/m²

Component	m ²
Glass-Fibre-Mat 450 g/m ²	2.0

Dolit LF Laminating-Solution

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-LF-Solution	1.940	100	10.000	8.300
Dolit-LF-Hardener	0.060	3	0.300	0.220
Total	2.000	103	10.300	

Area per batch	≈ 5.1 m ²
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NOTE! To achieve better stability on wall surfaces, 1 part Cab-O-Sil TS 720 can be added per 100 parts by weight (corresponds to 2.0 l or 0.1 kg per batch).

Glass-Fleece 30 g/m²

Component	m ²
Glass-Fleece 30 g/m ²	1.0

Alternative - conductive laminate

Component	m ²
Dolit-Hybrid-Fleece 20L	1.0

NOTE! Depending on the project-specific geometry, additional consumption for mats, fleece and solution must be planned due to the overlapping of the glass fibre materials.

STEEL

PRIMER

Dolit VE Barrier layer steel

The barrier layer is to be applied twice with 0.300 kg/m² each (total 0.600 kg/m²).

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-VE-Solution	0.281	100	2.180	2.000
Dolit-VE-Accelerator	0.006	2	0.045	0.045
Dolit-VE-Hardener	0.007	2.5	0.055	0.055
Cab-O-Sil TS 720	0.006	2	0.045	0.900
Total	0.300	106.5	2.325	

Area per batch	≈ 7.75 m ²
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LAMINATE

Glass-Fibre-Mat 450 g/m²

Component	m ²	
Glass-Fibre-Mat 450 g/m ²	2.0	

Dolit LF Laminating Solution Steel

Component	kg/m ²	Part by weight	kg / mix	Litres / batch
Dolit-LF-Solution	2.136	100	10.000	8.300
Dolit-LF-Hardener	0.064	3	0.300	0.220
Total	2.200	103	10.300	

Area per batch	≈ 4.7 m ²
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NOTE! To achieve better stability on wall surfaces, 1 part Cab-O-Sil TS 720 can be added per 100 parts by weight (corresponds to 2.0 l or 0.1 kg per batch).

Glass-Fleece 30 g/m²

Component	m ²	
Glass-Fleece 30 g/m ²	1.0	

Alternative - conductive laminate

Component	m ²	
Dolit-Hybrid-Fleece 20L	1.0	

NOTE! Depending on the project-specific geometry, additional consumption for mats, fleece and solution must be planned due to the overlapping of the glass fibre materials.

MIXING / APPLICATION

Processing may only be started when the application requirements are met and can be maintained during the entire processing and curing.

WORKING EQUIPMENT

Measuring cup	Anchor stirrer	Scissors
Scale	Paint roller	Mohair roller
Mixing vessel	Brush	Laminating brush
Drilling machine	Disk roller	Metal smoothing trowel

MIXING SEQUENCE



DANGER

The mixing sequence for VE systems must be strictly adhered to, otherwise there is a risk of explosion!



Mixing sequence for Dolit VE barrier layer

- Liquid components are measured or weighed out.
- First add **Dolit-VE solution** to the mixing vessel.
- Then add **Dolit-VE accelerator** and stir carefully with an anchor stirrer (300 - 500 rpm) to a homogeneous solution.
- Only then add **Dolit-VE-Hardener** and mix again carefully until a homogeneous solution is formed.
- Move the stirrer past the vessel wall and bottom.

Mixing order for other components

- Stir solutions well with an anchor stirrer (300 - 500 rpm) before use or partial withdrawal. Move the stirrer past the vessel wall and bottom
- Liquid components are measured or weighed out, transferred to a mixing vessel and carefully stirred.
- Mix the components with a drilling machine and an anchor stirrer (300 - 500 rpm) to a homogeneous solution. Move the stirrer past the vessel wall and bottom.
- Solids are measured or weighed out individually, added to the solution in portions and mixed in carefully until a lump-free mixture is obtained.

APPLICATION

CONCRETE

Primer

- **Dolit 848 Primer** Apply with paint roller or brush. No puddles must be left in concrete depressions or expansion joints.

Barrier layer

- Apply the **Dolit VE barrier layer** with paint roller or brush. No puddles must be left in concrete depressions or expansion joints.
- Sprinkle the fresh barrier layer with **Dolit-Filler 15**.
- After curing, remove excess **Dolit-Filler 15**.

Scraper Coat

- Apply the scraper coat to the primed substrate in the desired thickness with a metal smoothing trowel. Trowel marks and ridges are to be avoided.

Laminate

- The **Glass-Fibre-Mats** are freshly embedded in two layers one after the other with the necessary overlap (approx. 5 cm) in the **Dolit FN Scraper Coat**.
- Each layer is pressed on individually with the disc roller and laminating solution is applied with the paint roller.
- Each layer is vented with the disc roller.
- The seams of the individual layers are to be staggered by 20 cm.
- If it is not possible to process all layers in one operation, re-apply laminating solution after the surface has stopped sticking and continue as described.
- The final **Glass-Fleece** layer must always be processed together with the underlying **Glass-Fibre-Mats**.



STEEL

Barrier layer

- Apply the **Dolit VE barrier layer** with paint roller or brush. No puddles must be left in concrete depressions or expansion joints.
- After the first coat has cured, apply another coat of **Dolit VE barrier layer**.

Laminate

- The laminating solution is applied to the cured **Dolit VE barrier layer** with a paint roller.
- The Glass-Fibre-Mats are freshly embedded in two layers one after the other with the necessary overlap (approx. 5 cm).
- Each layer is pressed on individually with the disc roller and laminating solution is applied with the paint roller.
- Each layer is vented with a disc roller.
- The seams of the individual layers are to be staggered by 20 cm.
- If it is not possible to process all layers in one operation, re-apply laminating solution after the surface has stopped sticking and continue as described.
- The final **Glass-Fleece** layer must always be processed with the **Glass-Fibre-Mat** underneath.

POT LIFE

- The pot life depend on the temperature and are as follows at 20 °C.

Dolit 848 Primer	Dolit VE Primer	Dolit FN Scraper Coat	Dolit LF Laminating solution
60 – 120 min	≈ 40 min	≈ 60 min	≈ 30 min

WAIT- / CURING TIME

The minimum waiting time before further processing and the maximum waiting time between working steps are at 20 °C.

Layer	Until further processing	Maximum waiting time
Dolit 848 Primer	16 h	14 d
Dolit VE Barrier layer (for 2nd primer)	3 h	78 h
Dolit VE Primer (for FN scraper coat/laminate)	3 h	14 d
Dolit LF Laminate (e.g. for subsequent layers based on furan resin)	24 h	48 h

The finished coating is fully mechanically and chemically loadable after 7 days at 20 °C.

Abbreviations

h = hours

d = days

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CLEANING

Tools that are soiled with uncured materials can be cleaned with Dolit-Universal-Cleaner. Clean only in well ventilated areas and observe safety measures.

SAFETY / DISPOSAL

- Ensure sufficient ventilation, especially when working in closed rooms, pits or containers.
- Observe fire and smoking ban.
- Observe safety data sheets, hazard statements and safety advice on the containers.
- Wear prescribed personal protective equipment. Avoid skin contact with the materials.
- Clean and care for hands with skin protection soap and ointment. Do not use solvents.
- Wear a dust mask during grinding work, e.g. repairs.
- Follow operating instructions according to §14 GefahrstoffV and Technical Rules for Hazardous Substances TRGS 507.
- Comply with the accident prevention regulations of the employers' liability insurance associations.
- Avoid direct contact of the materials with the flame, especially when welding, watch out for welding beads.
- Preferably consume residual quantities.
- Do not pour residues down the sink or into the dustbin.
- Collect residues for disposal separately in durable, sealable and labelled containers.

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This issue replaces all previous versions.