PRODUCT INFORMATION

Asplit LF LAMINATE

PRODUCT DESCRIPTION

Asplit LF LAMINATE is a black, approx. 2 - 3 mm thick; glass mat reinforced lining system based on a furan resin.

FIELDS OF APPLICATION

Asplit LF LAMINATE can be applied on EP-coatings, sheets or rubber linings.

FEATURES

- Universal chemical resistance, especially against acids and solvents
- High temperature resistance up to +100°C (dry)
- Electrically conductive adjustable
- Very good storage stability

CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

SUBSTRATE

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

SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. If a sealing layer of rubber or coating is present, **Asplit LF LAMINATE** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

C-STEEL

Surfaces must be clean, dry and free of contaminants. 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. A minimum surface profile of $R_z \geq 70$ µm is required.

To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned to a relative humidity of ≤ 40%.

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%. Mechanical treatment by blasting with solid abrasives, high pressure blasting or shot blasting is recommended. After milling, flame blasting or staking, blasting is also required.

ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

APPLICATION

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

APPLICATION STEEL

Asplit 876 PRIMER is applied twice (undiluted) by using brushes, wide brushes or rollers. Before applying the second layer **Asplit 876 PRIMER**, the first layer of the **Asplit 876 PRIMER** must be through hardened (at least 12 hours). For reworking times > 24 hours, the last coat must be lightly grinded. The not yet hardened second primer coat must then be sanded in fresh state with quartz sand (0.3 - 0.7 mm, consumption: approx. 0.8 kg / m²). On the primed surface, the **Asplit LF** base coat is applied approx. 1.0 mm thick with a smoothing trowel and immediately the first 450 g/m² glass mat pressed fresh in fresh, – with an overlapping width of approx. 5 cm – and rolled on free from bubbles by using a roller, saturated with **Asplit LF** laminate solution. The remaining air must be removed by using a laminate roller. The second 450 g/m² glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit LF** laminate solution again and rolled on free from bubbles by using a roller, saturated with **Asplit LF** laminate solution. The remaining air must be removed again by using a laminate roller. Finally, a 26 g/m² C-Glass veil is applied as cover free from bubbles on the second glass mat fresh in fresh with a lamination roll. Due to the nature of hand craft application, small air inclusions can not be avoided 100%. This is already considered and it’s compensated by a higher lining thickness of **Asplit LF LAMINATE**.

Depending on the present chemical and thermal load, a thermal after treatment of **Asplit LF LAMINATE** must be carried out.

APPLICATION CONCRETE

Depending on the condition of the concrete it may be necessary to apply a levelling mortar. The levelling mortar is, if required over the entire surface, applied between the first and second primer. It may be necessary to use an additional adjusting agent (Cabosil) on vertical surfaces. On the properly prepared surface, the **Asplit 876 PRIMER** is applied is applied twice (undiluted) by using brushes, wide brushes or rollers at earliest 24 hours after application of the optional levelling mortar. Before applying the second layer **Asplit 876 PRIMER**, the first layer of the **Asplit 876 PRIMER** must be through hardened (at least 12 hours). For reworking times > 24 hours, the last coat must be lightly grinded.

Asplit LF LAMINATE

On the primed surface, the **Asplit LF** base coat is applied approx. 1.0 mm thick with a smoothing trowel and immediately the first 450 g/m² glass mat pressed fresh in fresh, – with an overlapping width of approx. 5 cm – and rolled on free from bubbles by using a roller, saturated with **Asplit LF** laminate solution. The remaining air must be removed by using a laminate roller. The second 450 g/m² glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit LF** laminate solution again and rolled on free from bubbles by using a roller, saturated with **Asplit LF** laminate solution. The remaining air must be removed again by using a laminate roller. Finally, a 26 g/m² C-Glass veil is applied as cover free from bubbles on the second glass mat fresh in fresh with a lamination roll. Due to the nature of hand craft application, small air inclusions cannot be avoided 100%.
This is already considered and it's compensated by a higher lining thickness of **Asplit LF LAMINATE**. Depending on the present chemical and thermal load, a thermal after treatment of **Asplit LF LAMINATE** must be carried out.

CONDUCTIVITY (optional)
Before applying the conductive top coat, place self-adhesive copper strips on the hardened **Asplit LF** to connect the surface to the ground. Guideline for the number of earthing straps: 1 band per 50m², but at least 2 bands per surface. Furthermore, before application of the top coat, all excess glass fibres must be ground off. In order to achieve a conductive top coat, the top coat is rolled up at the earliest 12 hours after application of the second laminate layer. If a brick lining is applied to the conductive top coat, the conductive top coat must be sanded with silicon carbide (0.5 - 1.0 mm) in its fresh state.

SLIP RESISTANCE
To improve the slip resistance of **Asplit LF LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m²).

WORK TOOLS

The following tools are essential for the application:

- PPE (Safety goggles, hand gloves etc.)
- Scissors / glass knife
- Lambskin rollers
- Laminate rollers (disc rollers)
- Mohair rollers to smooth the surface
- Steel smoothing trowels for application on even surfaces
- 2-3 cm wide spatulas
- Mixing vessels
- Stirrer (max. 300 r/min.)
- Surface Thermometer
- Hardness measuring device (Shore D)
- Flat / wide brush / roller
- High voltage tester
- Insulation measuring device (if necessary)

MIXING RATIO

The mixtures of the coating materials must be prepared in mixing vessels with a slowly operating stirrer (if necessary, Ex-protected). The agitation of the combined components should be at least 3 minutes and must result in a homogeneous and clump-free mixture.
Asplit LF SOLUTION CONDUCTIVE is highly tixotropic and needs to be stirred until the solution is flowable before adding the hardener. Mix only enough material that can be practically applied well within the pot life.

Levelling Mortar (optional)	**Parts by Weight [kg]**	**Parts by Volume [Liter]**
Asplit 876 SOLUTION	100	2.00
Asplit 876 HARDENER	40	0.81
FILLER F1	330	6.72

Asplit 876 PRIMER	**Parts by Weight [kg]**	**Parts by Volume [Liter]**
Asplit 876 SOLUTION	100	2.00
Asplit 876 HARDENER	40	0.81

Asplit LF LAMINATE Base Coat	**Parts by Weight [kg]**	**Parts by Volume [Liter]]**
Asplit LF SOLUTION	100	2.00
Asplit LF HARDENER	5	0.09
FILLER F1	240	5.28

Asplit LF LAMINATE Laminate Layer	**Parts by Weight [kg]**	**Parts by Volume [Liter]**
Asplit LF SOLUTION	100	2.00
Asplit LF HARDENER	3	0.05

Conductive Top Coat	**Parts by Weight [kg]**	**Parts by Volume [Liter]**
Asplit LF SOLUTION CONDUCTIVE	100	2.00
Asplit LF HARDENER	3	0.05

CONSUMPTION

STEEL

Layer	**Product**	**Coverage [g/m²]**
1st Coat Primer	**Asplit 876 PRIMER**	ca. 250
2nd Coat Primer	**Asplit 876 PRIMER** Quartz sand (0,2 – 0,7 mm)	ca. 250 ca. 800
Base Coat	**Asplit LF** laminate solution	ca. 1000
	FILLER F1	ca. 2400
1st Laminate Layer	**Asplit LF** laminate solution	ca. 1200
	Fibreglass mats 450 g/m²	ca. 500
2nd Laminate Layer	**Asplit LF** laminate solution	ca. 1200
	Fibreglass mats 450 g/m²	ca. 500
	C-Glass veil 26 g/m²	ca. 30
Conductive Top Coat (optional)	**Asplit LF SOLUTION CONDUCTIVE**	ca. 250

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Concrete

Layer	Product	Coverage [g/m²]
Levelling mortar (optional)	**Asplit 876 PRIMER**	ca. 1000
	FILLER F1	ca. 2400
1st Coat Primer	**Asplit 876 PRIMER**	ca. 250
2nd Coat Primer	**Asplit 876 PRIMER** Quartz sand (0,2 – 0,7 mm)	ca. 250 ca. 800
Base Coat	**Asplit LF** laminate solution	ca. 1000
	FILLER F1	ca. 2400
1st Laminate Layer	**Asplit LF** laminate solution	ca. 1200
	Fibreglass mats 450 g/m²	ca. 500
2nd Laminate Layer	**Asplit LF** laminate solution	ca. 1200
	Fibreglass mats 450 g/m²	ca. 500
	C-Glass veil 26 g/m²	ca. 30
Conductive Topcoat (optional)	**Asplit LF SOLUTION CONDUCTIVE**	ca. 250

POT LIFE (20°C)

Product	Time [min]
Levelling mortar	ca. 60
Asplit 876 PRIMER	ca. 60
Asplit LF LAMINATE	ca. 30
Conductive topcoat	ca. 20

CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Accessible	ca. 24 h

CLEANING

Clean all equipment with **SOLVENT T-200** immediately after use. The cleaning is done while the material is still not hardened.

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.
Asplit 876 SOLUTION	20 kg	592 0605
Asplit 876 HARDENER	8 kg	592 0615
Asplit LF HARDENER	10 kg	592 0800
Asplit LF SOLUTION	20 kg	592 0810
Asplit LF SOLUTION	50 kg	592 0811
Asplit LF SOLUTION CONDUCTIVE	10 kg	592 0815
C-Glass veil - 26 g/m²	250 m²	590 9800
E- Fibreglass mats - 450 g/m²	5 m²	590 0253
E- Fibreglass mats - 450 g/m²	20 m²	590 0260
E- Fibreglass mats - 450 g/m²	50 m²	590 0277
FILLER F1	25 kg	591 0140
SOLVENT T-200	4 kg	590 0610
SOLVENT T-200	8 kg	590 0611

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
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit LF HARDENER	≤ +25°C	24 Months
Asplit LF SOLUTION	≤ +25°C	12 Months
Asplit LF SOLUTION CONDUCTIVE	≤ +25°C	6 Months
FILLER F1	-	24 Months
SOLVENT T-200	5 - 25°C	60 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.

Asplit LF LAMINATE

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN EN 14879	Ω	< 10^6
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm³	1.154
Adhesion Strength Concrete	EN ISO 4624	N/mm²	Own tensile strength
Adhesion Strength Steel	EN ISO 4624	N/mm²	3
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry (Concrete)	-	°C	+60
Max. Operating Temperature Dry (Steel)	-	°C	+100

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

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