ARMOUR-GUARD PRIMER F

Flexible, very fast curing, PMMA based, primer for Armour-Guard® Systems

Armour-Guard Primer F is a flexible, very fast curing, PMMA (Polymethyl Methacrylate) based primer for Armour-Guard Systems, that can be applied on slightly damaged concrete with small cracks, wood, composite materials, asphalt, bituminous membranes and various other plastics.

BENEFITS

- Flexible
- Fast curing
- Applicable at low temperature -25°C / -13°F
- Optimal viscosity, horizontal and vertical application
- Widely applicable, excellent adhesion to most substrates
- Optimized polymerization for application under difficult conditions
- Easy application with roller or brush

FIELD OF APPLICATION

Armour-Guard Primer F is a flexible, primer for the Armour-Guard floor, membrane and other Armour-Guard Systems that are applied on imperfect concrete, with small cracks, and asphalt and bituminous membranes. The primer has excellent adhesion and can be applied at temperatures below freezing thanks to its rapid reaction and high reactivity. Armour-Guard Primer F can be used as a concrete protection layer, and when fully broadcasted with sand, can be used as a fast curing primer for epoxy and polyurethane floor systems.

APPLICATION

Note: The following is a typical application description. In case of other jobsite parameters, please contact a Transpo Regional Manager.

Pre-application Checks

Before starting the substrate preparation and applying any Armour-Guard range of products, it is important to test various parameters in order to achieve an optimal and sustainable result.

Compressive strength of the substrate: minimum 25 N/mm² / 3,500 psi.

Tensile strength of the substrate: minimum 1.5 N/mm² / 220 psi.

Armour-Guard Primer F must be applied on a dry surface. Moisture content in the substrate should be ≤ 6% checked with Tramex CME5 or similar moisture encounter device.

Appropriate and correctly placed expansion joints must be provided where required and these should not be overcoated.

The flatness/slope of the surface must be consistent with the desired requirements. Should this not be the case, corrective measures must be taken to fill in or smooth out the unevenness with compatible products, such as Transpo T-17.

Shrinkage cracks and passive cracks can be coated provided they are not performing as expansion joints and they are isolated from other movements of the structure. They should be addressed and treated with products that are complementary to the substrate and to the Armour-Guard System to be installed.

Required Tools

- Mixer with spiral paddle (min. 300 rpm)
- Spatula or rubber squeegee
- Brush or paint roller suitable for synthetic resin-based products
- Masking tape

Preparation of the Substrate

Cracks, joints and other parts that show water leaks must first be made completely water-tight and leak-proof using products compatible with Armour-Guard Systems.

The surface must be mechanically prepared to CSP 4-6 / SSPC-SP 10 (NACE No. 2) by abrasive blasting, scarification, milling, micro milling or other process providing that it achieves the required surface profile. Tiles are to be fully degreased and ground with a diamond blade. These treatments ensure that an open texture surface is obtained, to remove the cement laitance from concrete, and old remnants of coatings and adhesives.

High pressure water jetting is possible but the surface must dry sufficiently (moisture content in the substrate: ≤ 6 % moisture) before applying the primer.

Always apply the products on a clean surface, free from adhesion reducing and deleterious substances such as dirt, oil, grease, old coatings or surface treatments. Areas of the surfaces to be coated that do not meet the

requirements as described above (compressive strength, tensile strength, parts that are not well connected) must be treated or removed and repaired according to a correct method and with products that are complementary to the substrate and the Armour-Guard System to be installed. Remove any loose parts by brushing properly and with compressed air/high-power leaf blowers and remove dust with an industrial vacuum cleaner.

Preparation of the Product
Mix Armour-Guard Primer F well before use, approximately 3 minutes with spiral type mixer as paraffin can separate during storage. Dispense an amount of resin that can be processed within 15 minutes. Add 1 to 6% of Armour-Guard Catalyst depending on jobsite temperature conditions. Mix until completely dissolved. Armour-Guard Catalyst must be ordered separately.

Add Armour-Guard Catalyst to Armour-Guard Primer F

Temp.	In %	Armour-Guard Catalyst per 1kg Armour-Guard Primer F
0°C / 32°F	5%	50 g
5°C / 41°F	4%	40 g
10°C / 50°F	3%	30 g
20°C / 68°F	2%	20 g
30°C / 86°F	1%	10 g

Preparation of the Equipment
Always work with clean mixing containers and application material.

Application
Armour-Guard Primer F should be evenly distributed with a spatula or rubber squeegee and a short-haired paint roller. Apply enough primer to create a full coverage, unbroken film with no dry spots or puddles. Apply a second coat of Armour-Guard Primer F on highly porous surfaces. Extra mechanical adhesion can be obtained by broadcasting dry natural quartz/sand with grain size 0.2 mm to 0.8 mm (sieve size 70 – 25) into wet primer at a coverage rate of 0.3 to 0.5 kg/m². Polyurethane and epoxy systems can be applied onto a fully broadcasted Armour-Guard Primer F. Do not disturb the paraffin layer that occurs during curing.

Finishing
The cured primer can be overcoated after one hour (+20°C / 68°F) with the further Armour-Guard system to be installed.

Application Conditions
Concrete should be at least 28 days old.

The recommended processing temperature for substrate, environment, material and products is between 0°C and +35°C / 32°F and 95°F. For temperatures lower than 0°C / 32°F please contact a Transpo regional manager for guidance.

Relative humidity: Max. 85%

Dew point: The temperature of the substrate and of the applied product must be at least 3°C / 5°F higher than the dew point. Avoid condensation on the surface from the moment that the application starts until the complete curing of the products. Ensure adequate ventilation and a low relative humidity during curing.

Cleaning and Maintenance
Clean the used tools with MEK, acetone or m/ethyl acetate before the curing of Armour-Guard Primer F. Cured products residues must be removed mechanically.

Complementary Products
- Cleaning solvent for tools: MEK or m/ethyl acetate
- Armour-Guard Catalyst

Advice to Check Adhesion on a Contaminated Surface
After the substrate preparation, take a small amount of Armour-Guard Primer F. Add 3% of Armour-Guard Catalyst. Mix until the powder is completely dissolved. Pour the mixture in a large layer over the surface and let it cure completely. Test the adhesion by separating the primer from the surface with a hammer and chisel. With a sticky or poorly adhering contact surface, the substrate must be further cleaned or an alternative primer must be selected.

TECHNICAL DATA

Appearance — Composition
Liquid with low viscosity, colourless, slightly cloudy.

Reaction Times
Reaction time after mixing: 10 to 15 min.

Trafficable: after 1 hour

Recoat: after 1 hour

Fully mechanical load: after 2 hours

Full chemical resistance: after 2 hours

Times measured at 20°C / 68°F; lower temperatures extend the curing time.

Consumption
Consumption: 0.35-0.5 kg/m² / 110-80 ft²/gal

For porous surfaces the consumption will be higher

Technical Data

Odour	Methyl methacrylate (See also information sheet “Armour-Guard Odour”)
Initiator: Armour-Guard Catalyst	BPO 50%, depending on the temperature from 1% to 6% weight calculated on the proportion of Armour-Guard Primer F
Viscosity	100 - 300 mPa.s (20°C Brookfield, spindle III/200 rpm)
Density	1.0 g/cm³ ±0.1 (20°C)
Flash point	10°C (MMA, DIN 51 755)
Hardening test (test volume)	300 g Armour-Guard Primer F with 6 g curing powder
Exothermic peak	120–145°C
Armour-Guard Primer F + 2% Armour-Guard Catalyst	
Density	0.98 g/cm³
Colour	Yellow-brown transparent
Shore D hardness	70–80

Chemical Resistance

Polymerized Armour-Guard resins have good chemical resistance to alkalis, petroleum derivatives, acid, salts and maintenance products. Armour-Guard resins are not resistant to solvents. For more information please contact a Transpo regional manager.

CE Marking

CE

Transpo Industries	
12	
EN 13813	
Synthetic resin floor/coating for indoor use in buildings	
Release of corrosive substances	SR
Abrasion resistance	NDP
Bond strength	≥B2,0
Impact resistance	NDP
Reaction to fire	E_{fl}

CE

749

13
0749-CPR-BC2-562-4714-0001-001

EN 1504-2:2004

DoP N°: DOP02PLC01S2
DoP N°: DOP02PLC02S2
DoP N°: DOP02PLC03S2
DoP N°: DOP02PLC04S2

Reference documents

Information sheet “Armour-Guard Odour.”

bsi. ISO 9001:2015 Quality Management FM 78518 bsi. ISO 14001:2015 Environmental Management REACH COMPLIANT · COMPLIANT · COMPLIANT atg 3151

PACKAGING

Armour-Guard Primer F

20 kg / 5.28 gal	Metal pail
180 kg / 47.55 gal	Drum

To be ordered separately:

Armour-Guard Catalyst

10 kg / 22 lb	Plastic pail
25 kg / 55.1 lb	Box

STORAGE AND SHELF LIFE

Store Armour-Guard products in a dry, well-ventilated storage area between +5°C and +35°C / 41°F and 95°F.

Shelf life: 12 months after production date.

In case of doubt, please contact Transpo and state the batch number on the packaging. Do not discharge into groundwater, surface water of sewers. Dispose of contaminated packaging and residues in accordance with the applicable legal requirements.

SAFETY PRECAUTIONS

Carefully read the safety data sheets before using Armour-Guard products. The products emit a characteristic odour during processing. Ensure adequate ventilation, keep away from sources of ignition and do not smoke. Avoid skin contact. Eye irritation and/or hypersensitivity may occur with severe vapor concentration, inhalation and/or skin contact. Do not store food or beverages in the work area. Always wear personal safety equipment in accordance with the applicable local guidelines and legislation. Gloves and safety glasses are mandatory.

The value ranges stated above are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

To be used as general guidelines only.

The base language for this technical data sheet is English.