

Fernothersm Coating®

Fire-resistant coating for pipes and electric cables

TDS Fernothersm coating 2305EN

Fernothersm Coating is a fire-retardant coating that expands when exposed to fire. It is developed to enhance the fire resistance of fire seals by protecting electric cables, cable trays, and metal pipes. The coating protects the plastic sheath of the cable and, therefore, secures the power supply during a fire. Fernothersm coating insulates the cables during a fire, thereby increasing the overall fire resistance.



Properties

- Prevents damage from fire and smoke
- The intumescent coating expands slightly and has an endothermic effect in case of fire
- Smoke, gas, and vapor-tight
- Suitable without the use of a primer for materials such as cables with a PVC and rubber jacket, for steel and primed steel, for most non-porous materials such as concrete, brick, masonry, wood, and plaster
- After applying a protective topcoat, Fernothersm coating can also be used for outdoor applications.
- White in colour and permanently elastic
- Does not affect cables and pipes
- Formaldehyde and halogen-free
- Resistant to aging
- Environmentally friendly

Applications

- Flexible walls
- Rigid walls and floors
- Cable trays
- Uninsulated steel pipes up to Ø114mm
- Cables and cable bundles up to Ø100mm

*Classifications range from EI45 to EI120, for specific applications refer to the ETA.

Testing / certification

- Tested according to NEN 6069 and EU standard EN 1366-3, ETA 22/0710
- Certification according to EAD 350454-00-1104
- Tested for air permeability according to EN1026 up to 600Pa
- Indoor Air Comfort Gold, VOC A+ Regulation, BREEAM, BlueAngel, LEED v4.

Technical data

Product:	Intumescent coating based on acrylic
Classification:	Up to E240, EI240*
Curing system:	Water evaporation
Health and safety:	Not dangerous
Test Standards:	International Electrotechnical Commission 30661, EuroNorm 1366
Classification:	EN 13501-1, EU Regulation 216/363
Application temperature:	10°C to +30°C. / ≤ 80% RH
Temperature resistance:	-30°C to +80°C
Skin formation time:	60 min @ 22°C / 50% RH
Reaction to fire:	B-s1, d0
Thermal conductivity:	0.82/0.88 W/mK @ 20mm depth
VOC content:	0.0001 g/l
Functionality retention:	12 years for intended use

*For achieved fire resistance per application, see test report (ETA 22/0710 & 22/0711)

Colour

Matte white

Handling of the product

Apply with a roller, brush or airless spray. The open time is 20 minutes at 20°C / 50% RH. Clean tools and fresh stains with water.

Packaging

Plastic buckets of 3 litres.

Storage and shelf life

Store in a cool and dry place (5°C < 25°C). Shelf life is at least 6 months in original packaging.

Safety measures

Keep the product out of reach of children. Avoid prolonged contact with skin. In case of eye contact, rinse with plenty of water and seek medical advice if necessary. The cured product is safe to handle. See the Material Safety Data Sheet (MSDS) for more information.

Transport classification

Not applicable; no special measures are required.



Processing instructions

- Surfaces should be clean, free of dust, oil and grease. Loose parts should be removed beforehand.
- Close the opening around the conduit with Fernocryl as described in the ETA. Use backing material if necessary.
- Mineral wool (min.80kg/m³) can be used as backing material.
- At least electrical cables, cable trays, and metal pipes should be coated 20 cm from the Fernoboard fire barrier, wall, or floor. Refer to ETA 20/0710 (page 74) for layer thicknesses.
- For external use, FernoTherm can be coated. The best weather resistance is achieved with solvent-based or polyurethane paints. (Acrolon 7300, Dulux Weathershield, Jotum Hardtop, Sikkens Redox, Temadur)

Supporting constructions

- Flexible walls** must have a minimum thickness of 75 mm and comprise steel or timber studs* lined on both faces with minimum 1 layer of 12.5 mm thick boards. Apertures are not required to be lined.
- Rigid walls** must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.
- Rigid floors** must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m³.
- The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

*no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

Limitations

FernoTherm Coating should not be used for permanently damp areas without a topcoat. The product should also not be applied on joints with excessive movement or on bituminous substrates.

Pipe end configuration

Different intended uses of pipes can lead to the need for different requirements for the pipe end configuration within a test. During a fire the conditions of the pipe and sealing system which are exposed, depend on whether both or either ends of the pipe are sealed in practice. Within the EN 1366-3 Test standard can be chosen not to cover (or close) the pipe, or to cover the pipe in the furnace, or outside the furnace, or on one or both sides.

For instance EI 60 U/C means the pipe was uncapped inside the furnace, and capped outside the furnace. The pipe end configuration / pipe system relations listed below may be used as a rule of thumb.

Intended use of pipe		Test Condition ⁴⁾
Drainage or sewage pipe, plastic	Ventilated drain	U/U ¹⁾
	Unventilated drain	U/C ¹⁾
	Drain w/water trap	U/C ¹⁾
	Not at drainage	C/C ²⁾
Rainwater Pipe, Plastic	At drainage	U/U ¹⁾
	Not at Drainage	C/C ²⁾
Pipe in closed circuit (water, gas, air, electricity etc.)		C/C ²⁾ ³⁾
Flue gas recovery system pipe, plastic		U/C ¹⁾
Pipe with open ends and ≥ 50cm length on both sides, plastic		U/U ²⁾
Pipe supported by suspension system, metal	Fire rated support	C/U ¹⁾
	Non-fire rated	U/C ¹⁾
Waste disposal shaft pipe, metal		U/C ¹⁾

¹⁾ Stated in NEN EN 1366-3.

²⁾ Bloem Sealants judgment based on tests.

³⁾ Metal pipes should have fire rated support.

⁴⁾ U/U classified fire seals cover C/U, U/C and C/C. C/U classified fire seals cover U/C and C/C. U/C classified fire seals cover C/C.

