

Fernocryl®

Intumescent acoustic acrylic sealant

TDS FernoCryl 2404EN

FernoCryl is an intumescent acoustic sealant developed to seal linear joints and service gaps in compartment walls and penetration seals. Activation takes place at approx. 180°C when the sealant will expand, forming a durable char preventing the passage of fire and smoke for periods up to 240 minutes (EI240).



Properties

- FernoCryl swells up at 180°C. when exposed to fire
- Prevents passage of fire and smoke up to 240 minutes
- Very high sound isolation
- Low emissions, environmentally and user friendly
- Suitable to most surfaces including concrete, masonry, metals, glass, plastics and many other non-porous materials
- No priming necessary to most substrates
- Increased movement capability
- Easy extruding and tooling for a smooth surface finish.
- Tack free after 60 minutes
- Over paintable with most emulsion based and solvent based (Alkyd) paints

Applications

- Flexible walls
- Rigid walls and floors
- Timber walls and floors
- Joint dimensions in floors up to 100 mm
- Joint dimensions in walls up to 30 mm
- Adhesive application for Fernoboard fire partition system
- Plastic pipes including (U)PVC, PE, ABS, PEX, and PP
- Electrical cables, cable bundles, wiring, Alupex, metal pipes with and without insulation.
- For smoke and airtight finishing of Fernowrap and Fernocollar fire sleeves.

Testing / Certification

- Tested according to NEN 6069 and EU Standard EN 1366-3 and EN 1366-4, ETA 22/0711 & ETA 22/0715
- CE Certificate No. 2531-CPR-CXO10390
- Certification according to EAD 350454-00-1104 and EAD 350141-00-1106
- Tested for air permeability according to EN1026 up to 600P
- Emicode EC1-Plus, VOC A+ Regulation, BREEAM, BlueAngel, LEED v4.

Technical data

Description:	Intumescent acrylic paste
Classification:	Up to E240, EI240*
Application temperature:	+5°C to +30°C
Service temperature:	-20°C to +70°C
Skinning time:	60 min. at 20°C / 60% RV
Hardening time:	Full cure up to 5 days depending on depth, humidity and temperature
Movement capability:	12.5% (ISO11600)
Density (gr/ltr.):	1.60
Reaction to fire:	B-s1, d0
Thermal conduction:	0.82/0.88 W/mK @ 20mm. depth
Expansion rate:	Up to 3 times
Sound isolation ≥12mm. depth:	Seal single sided: Rw 62dB double sided: Rw > 62dB
Air Permeability:	Air, smoke, gas tested at 600Pascal (EN1026:2016)
Service life:	30 years

*For achieved fire resistance per application, see test report (ETA 22/0711 & 22/0715).

Handling of the product

The product can be applied using a standard hand or battery-operated gun. Smooth the sealant with a jointing tool moistened with water. Tools and stains can be cleaned with water. Hands can be cleaned with Bloem PowerScrub wipes. Once cured, the sealant can only be removed mechanically.

Packaging

310 ml cartridges, 25 cartridges per box
600 ml sausages, 12 sausages per box
5-liter plastic pails

Colour

Standard white

Storage and shelf life

Store in a cool and dry place (5°C < 25°C). Shelf life is at least 24 months in original packaging.

Safety measures

Keep the product out of reach of children. Avoid prolonged contact with skin. Do not contact food or beverages until the sealant has cured. 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

- Substrates must be clean, free of dust, oil, and grease. Loose parts must be removed beforehand.
- Joints and gaps must have a width of ≥ 10 mm.
- Mineral wool (80kg/m^3) can be used as backfill.
- The required minimum depth according to the ETA must be completely filled up to the surface.
- FernoCryl should not be applied if the ambient temperature is below $+5^\circ\text{C}$ or higher than 35°C . Temperatures outside this range can affect the curing of the kit and reduce adhesion.

Supporting structures

- Flexible walls** must have a minimum thickness of 75 mm and comprise steel studs or timber studs* lined on both faces with minimum 1 layer of 12.5 mm thick boards.
- Timber walls** must have a minimum thickness of 100 mm and comprise solid wood or cross-laminated timber.
- Timber floors** must have a minimum thickness of 150 mm and comprise solid wood or cross-laminated timber.
- Rigid walls** must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m^3 .
- Rigid floors** must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m^3 .
- The supporting construction must be classified following 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

Fernocryl should not be used in permanently damp spaces.

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 ≥ 50 cm 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.

