

PT. Trinitas Victori Pyrogen Nusantara
Total Fire Protection Specialist
Products - Services - Solutions

Authorised Distributor :
PT. Trinitas Victori Pyrogen Nusantara
Komplek Duta Harapan Indah Blok OO 53,
Jalan Kapuk Muara, Penjaringan Jakarta Utara 14460
DKI Jakarta – Indonesia
Telp. 021 26080740 ; 6682815 Fax. 021 6682815
Email. info@tvpn.co.id - www.tvpn.co.id

Authorised Dealer / Agent :

www.pyro-safe.co.id



PYRO-SAFE

Fire Protection Products & Systems



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safety via technology

PYRO-SAFE FLAMMOTECT-A ablative fire protection coating

One product - many applications!

PYRO-SAFE FLAMMOTECT-A is available in three different viscosities.

These fire protection products cover a wide application area, e.g. the fireproof coating for cables and cable systems.

PYRO-SAFE FLAMMOTECT-A is impressively simple and straightforward to use, has excellent drying properties and is a cost-effective solution.

Product benefits

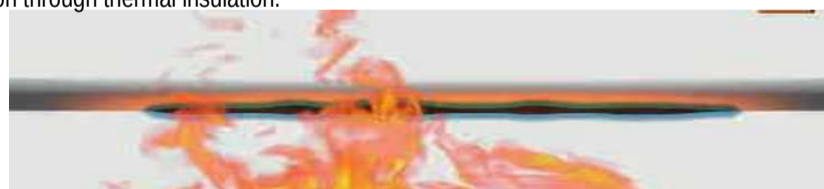
- Available in three viscosities
- Suitable for indoor and outdoor applications
- Tested in salt water
- Various proofs for use in nuclear power plants
- Resistant against moisture, freeze-thaw cycles, UV radiation and various oils and chemicals
- High elasticity in processed form - no spalling of the coating material under mechanical loads
- An electrical derating is not required
- Solvent free, contains no halogens
- Does not contain asbestos, lead, mercury, hexavalent chromium or polybrominated biphenyl
- Does not release toxic fumes
- No explosion protection required for the application
- Does not impact on other construction materials: polyethylene (PE) & polyvinyl chloride (PVC)
- Tensile strength (DIN 53455) and evaluation using a sample piece
- Non-hazardous material accordance to GefStoffV [German regulation on hazardous substances]



Fire protection

The cooling effect of ablative coatings is the result of e.g. the release of chemically bonded water. In the event of fire, at about 200 °C, elements in this coating separate off into water, cooling the surface of the material and diluting the concentration of flammable gases. This reduces the intensity of the impact of the fire on the coated material. Once the chemical processes are complete, the components in the coating also form a microporous, inorganic barrier layer which provides additional surface protection through thermal insulation.

- Functions in a highly endothermic manner
- Forms a ceramifying protective coating

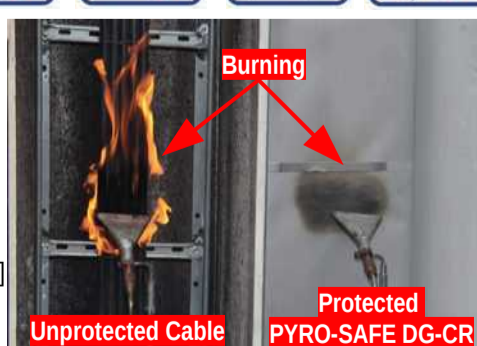


PYRO-SAFE DG-CR 0.7 Intumescent fireproof bandage

PYRO-SAFE DG-CR 0.7 is a flexible composite fibre glass fabric with grey external PU coating and an internal intumescent coating of PYRO-SAFE DG based on a synthetic dispersion. The product is weather and UV resistant, flexible and, in the event of a fire, thermal exposure causes it to form a heat-insulating foam layer on the inside which fills the free space between the structural component to be protected and the fabric thereby preventing the fire from spreading.

Product benefits

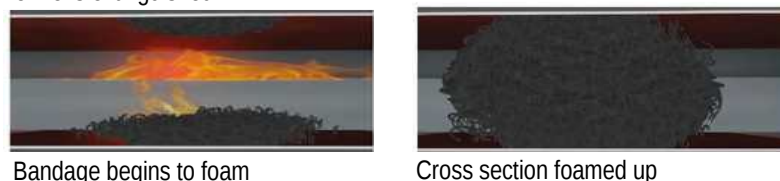
- Very quick reaction with a strong foaming pressure
- **No cleaning** of the cable systems required
- Easy to retrofit cables
- Easy to handle - no special equipment is required
- No film thickness measuring necessary
- Intumescent paint on one side only - exposed side easy to clean
- Weather resistant - suitable for indoor and outdoor applications
- Resistant against moisture, freeze-thaw cycles, UV radiation and various oils & chemicals
- Solvent-free, contains no halogens
- Does not contain asbestos, lead, mercury, hexavalent chromium or polybrominated biphenyl
- Does not release toxic fumes
- No explosion protection required for the application
- Non-hazardous material accordance to GefStoffV [German regulation on hazardous substances]



Fire protection

When exposed to heat, the intumescent product PYRO-SAFE DG-CR 0.7 (which is based on exfoliating graphite) begins to foam up. When a reaction temperature of approximately 150 °C is reached under high pressure (the so-called expansion pressure point) the exfoliating graphite foams up to many times its original volume. Through additional components in the intumescent layer, this causes the formation of an insulating coating which lies densely around the cable and seals off the cable tray cross-section. The fire is extinguished.

- Creation of intumescent layer through chemical reaction
- Protective layer (foam-like, carbon matrix)



Bandage begins to foam

Cross section foamed up

PYRO-SAFE NOVASIT BM fire protection mortar

Fibre-free special mortar according to DIN EN 998-2 universally applicable for installation of fire penetration sealing systems with cables, pipes or combined penetrations.



Fields of application

Fire protection mortar (Fire behaviour class A1 according to DIN EN 998-2) applicable for approved fire penetration sealing systems in massive walls and floors with cables, pipes or combined penetrations.

The PYRO-SAFE NOVASIT BM combination penetration seal with mortar seal of the wall or floor recess with PYRO-SAFE NOVASIT BM belong to the "mortar" product type in accordance with ETAG 026-2 and is assessed and evaluated accordingly. The fire protection mortar PYRO-SAFE NOVASIT BM is classified as a product for use in penetration seals in accordance with ETA-16/0132.

Product features

- One-component
- Hydraulically hardening; applied by spraying, pressing and manual installation
- Free from fibres, phenols and halogens
- Ageing resistant.
- Fire rating of system : up to 4 hours

Durability and serviceability

The fire protection mortar "PYRO-SAFE NOVASIT BM" fulfils the type Z2 in accordance with EOTA TR 024.

PYRO-SAFE NOVASIT BM can be subjected to the conditions of inside rooms with and without exposure to moisture, without substantial changes to the fire protection characteristics being expected.



PYRO-SAFE DG-CR BS fire protection wrap for combustible pipes

A new product, fire protection fabric PYRO-SAFE DG-CR BS, was developed in order to guarantee optimum closure of flammable pipes in case of fire. In this regard, the excellent product properties are to be considered :

- **Flexibility** : The product must wrap around the flammable pipe without being damaged and causing damage.
- **Easy processing** : Selection of a limited, highly-effective coat thickness of the intumescent agent and a corresponding fibre optic filament fabric allow it to be cut easily with a pair of scissors or a knife.



Features

PYRO-SAFE DG-CR BS is a fire protection fabric made of a fibre optic filament fabric as carrier, which is coated on both sides with PYRO-SAFE DG as active intumescent ingredient. The machine production process ensures evenly-defined material strength. In case of fire, the product forms an intumescent foam layer under the effect of heat, which occupies the free space between the component to be protected and the fabric, limits the propagation of the fire. PYRO-SAFE DG-CR BS is suitable for indoors and outdoors use.

Advantages

- Easy Handling as a pipe wrap for combustible pipe
- Quick closing of the opening resultant with fire in flammable pipes
- Easy processing



PYRO-SAFE CT & PYRO-SAFE CT ML Cable tube penetration sealing

PYRO-SAFE CT cable tube is an independent fire protection sealing system for cables, electrical conduits and other applications. It is easy to install and meets all of the specified fire protection requirements.

In the event of a fire, the intumescent fire protection fabric, bonded into half-shells foams, seals the spaces between the cables and thereby prevents the fire from spreading. The insulating effect of the foamed material reduces thermal conduction. Soft foam plugs which are adapted to the application and sealed with the ablative PYRO-SAFE FLAMMOTECT-A are used to seal the face ends, and act as cold smoke seals.

What are system floors?

System floors serve to accommodate the various, modern IT, telecommunications and electrical engineering installations, which are rapidly expanding or being replaced.



Advantages

- Fast and easy installation
- 100% filling of the cable tube cross-section possible
- No additional framing is required in platerboard
- Easy retrospective installation
- Installation possible even after cable pulling
- Group configurations with zero spacing possible

PYRO-SAFE CT ML system floor sealing variant

- Fast and easy installation from one side
- 100% filling of the "mousehole" cross-section possible
- Group configurations with zero spacing possible
- Rated installation beneath fire doors and in rated solid and plasterboard walls
- The floor tiles of the system floor must only be non-combustible (no requirement on the certain fire resistances)

PYRO-SAFE Scope of Services

svt Group of companies



- Founded 1969, over 45 years of experience
- Germany's leading manufacturer of passive fire protection
- Extensive experience in research & development and manufacturing passive fire protection products and systems
- Global presence (spanning across more than 50 countries) through local subsidiaries, partners and distributors

Research & Development



- Executing training courses and seminars
- Developing tailor made solutions for specific technical challenges
- Continuous improvement of existing products
- Development, testing, certifying new products and systems

Production



- ISO 9001:2008 certified in-house production facilities
- In-house quality control covering every step of production process
- Tracking and protocoling of every raw material and final product batch
- On-site warehouse ensuring ready available stock for most products

1 PYRO-SAFE Flammotect penetration seal

Penetration seal for all kinds of cables and pipes as well as for several construction and implementation options; using mineral fibre boards, fire protection paint and filler PYRO-SAFE FLAMMOTECT-A.

Fire rating up to 240 minutes (integrity and insulation).

Single Layer

Double Layer

2 PYRO-SAFE Universal penetration seal

Penetration seal for all kinds of cables and pipes as well as for several construction and implementation options; using mineral fibre boards, fire protection intumescent paint PYRO-SAFE FLAMMOPLAST KS 1 and filler PYRO-SAFE FLAMMOPLAST KS 3;

Fire rating up to 240 minutes (integrity and insulation).

3 PYRO-SAFE Novasit BM

Made of special fire-retardant mortar. Maintains the fire resistance of walls and floors when cables, cable bundles, cable trays, combustible and/or non-combustible pipework are passed through them.

Fire rating up to 240 minutes (integrity and insulation).

4 PYRO-SAFE CT cable tube

PYRO-SAFE CT, the simple penetration sealing system with a "click" for existing cable conduit transits and new installation.

Fire rating up to 120 minutes (integrity and insulation).

5 PYRO-SAFE CT ML cable tube

Cable tube versions used as penetration seals in raised floors for cables and electrical conduits in fire rated walls and below fire doors and plasterboards.

Fire rating up to 120 minutes (integrity and insulation).

17 PYRO-SAFE Pipe collars and/or PYRO-SAFE DG-CR BS

For plastic pipe penetrations through walls and floors. Both systems contain an intumescent material foaming up in case of fire and pressing the plastic pipe together.

Fire rating up to 120 minutes (integrity and insulation).



6 PYRO-SAFE Water-based dispersion coatings for cables

Intumescent or ablative coating; prevents fire spread and encapsulates fire loads inside cable installations.

Rating: up to 60 minutes in accordance with IEC 60 332-3-22 cat. A

7 PYRO-SAFE DG-CR 0.7 Cable bandage fire protection system

Fire protection system for cables, cable bundles and trays made of a bandage based on an intumescent coating. Also suitable for areas with constant moisture or outdoor applications.

Rating: up to 120 minutes in accordance with IEC 60 332-3-22 cat. A

16 PYRO-SAFE Joint sealing systems

Simple Joint sealing systems for joint widths up to 300 mm made of mineral fibre board strips with fire retardant coatings for solid construction elements.

Fire rating up to 120 minutes (integrity and insulation).

8 PYRO-SAFE DG-SC

Simple pipe penetration seal made of mineral wool and PYRO-SAFE DG-SC for combustible pipes dia. up to 110 mm and non-combustible pipes dia. up to 48.3 mm.

Fire rating up to 120 minutes (integrity and insulation).

15 PYRO-SAFE Joint sealing system GS two-ply

Two-ply fire protection reinforcement, with intumescent coating on one side for expansion joints with big movements in floors and solid walls.

Fire rating up to 120 minutes (integrity and insulation).

9 PYRO-SAFE ES

Simple cable penetration seal made of mineral wool and PYRO-SAFE FLAMMOTECT-A.

Fire rating up to 90 minutes (integrity and insulation).

14 PYRO-SAFE NOVASIT BM PYRO-SAFE NOVASIT K2 PYRO-SAFE GFM

Fire-retarding sealing made of special mortar for fire damper installation in solid walls and floors.

Fire rating up to 120 minutes (integrity and insulation).

13 PYRO-SAFE Flammoplast SP-A2 system for structural steel

Water-based reactive fire protection system for structural steel.

Fire rating up to 60 minutes to maintain the load-bearing capacity

12 Intumescent fire protection coatings for timber

Intumescent fire protection coatings for solid timber, plywood, chipboard and veneer; for indoor and outdoor use.

11 PYRO-SAFE Bag penetration seal

Variable, interim penetration sealing system made of fire protection bags for electric cables and power lines of all types; has to be replaced afterwards by a durable sealing system.

10 PYRO-SAFE CMS modular gland system

Multi-purpose modular sealing system for cables and pipes with Ø 3 mm up to 114 mm; available as rectangular or circular frame; certified gas, pressurised-water and air tightness (e.g. shock-loaded up to 16.5 bar).

Industrial Applications

Special fire protection products for use in system components of rail vehicles, aircraft and ships as well as applications in other industrial components are marketed by the OEM division of svt and AIK. The close cooperation in the amendment and development of these products according to the specific requirements of the customers is an essential basis for svt.



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Passive Fire Protection