protect your values

PYRO-SAFE©
Fire protection

PYRO-SAFE® DG-CR BS

Fire protection wrap

Fire protection
for combustible pipes

svt
FIRE PROTECTION

PYRO-SAFE© Fire protection

Passive fire protection for combustible pipes

Contents

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Combustible pipes

Plastic pipes are present in buildings in the most different variations. Their most well-known use is as sewage pipes. Modern mixtures and composite materials extend the applications. They are increasingly replacing metal pipes in the drinking water supply, for example An important reason for the replacement is the easy assembly, besides the cost-efficiency.

Plastics are light, resistant and flexible.
Different materials are available for the countless areas of application.

Commonly used materials are:

PVC (polyvinylchloride)

PVC is the best known and longest used pipe material. The material is characterised by high strength and chemical resistivity. It is often used in sanitary engineering in the form of drinking and drainage water pipes.

PP (polypropylene)

PP has high impact, chemical resistance and is relatively temperature resistant. PP is used as material for drainage water pipes.

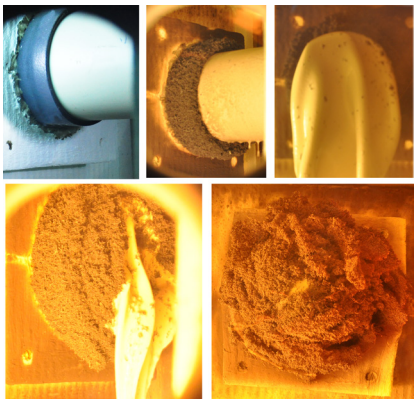
PE (polyethylene)

PE is easy to weld and has high compressive strength. PE is used as material for pressure pipes in the water supply and gas lines due to these properties.

Fire Protection

Plastic pipes are problematic and present high risk in case of fire. The melt away due to the heat and flames.
An opening forms through which smoke gases and flames can reach neighbouring areas unhindered.
A fire protection product is required here, to close the opening formed by the fire to quickly and safely.

The fire protection wrap PYRO-SAFE DG-CR BS meets these requirements extremely well.



The basis for the fire protection product is the intumescent substrate brought onto the layer on both sides.
It reacts to the effect of heat, and forms a heat-insulating foam layer.
The opening thereby closes quickly and safely against fire and smoke gases.

Fire protection fabric PYRO-SAFE® DG-CR BS

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, like

- **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.

are to be considered.

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, and limits the propagation of the fire.
PYRO-SAFE DG-CR BS is suitable for indoors and outdoors use.

Colour	red / grey both sides can be used towards the combustible pipes
Form	Fabric coated with intumescent fire protection paint on both sides
Weight per unit area	1.580 – 1.950 g/m²

Handling

• Processing temperature + 5°C – max. +50 °C; < + 5°C Loss of flexibility; < 85% relative air humidity.
• (Pre-)cut with ordinary cutting tools, e.g. scissors or utility knives.

Advantages

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

Mode of action

The used intumescent fabric on a base of exfoliated graphite foams with high expansion pressure.
It is thus capable of closing the opening resulting from the fire load of melting construction materials, and can therefore ensure that the component is rendered fire-proof.

Graphite is a naturally occurring crystalline type of carbon. Exfoliated graphite is formed due to the deposits of certain chemical compounds between the carbon layers. When the reaction temperature is reached, the layers are suddenly dispersed, and the volume of the graphite particles thus rapidly multiplies.
In this manner, a carbon network is established on the exfoliated graphite. This foam adheres due to other compounds of the intumescent fabric, and forms an insulating foam layer.

Application
PYRO-SAFE® DG-CR BS

Permissible services

The fire protection wrap can be used for the following combustible pipes:

Ventilated sewage pipes and close pipe systems.
Non-flammable fluids or gases (except for ventilation lines) may be led into the pipes.

Pipe material	Pipe outside dia. [mm]	pipe wall thickness depending on pipe dia. [mm]	
		min.	max.
PVC-U according to EN 1329-1. EN 1453-1. EN 1542-1. EN 15493 and DIN 8061/8062 or PVC-C according to EN 1566-1	≤ 50	1.8	3.7
	≤ 110	2.2	8.2
	≤ 160	3.2	11.9
PP-H according to EN 15874 and DIN 8077/8078	≤ 50	1.8	4.6
	≤ 110	2.7	10
	≤ 160	3.9	9.1
PE 100. according to EN 1555-2. EN 12201-2+A1 and DIN 8074/8075	≤ 50	1.8	4.8
	≤ 110	2.7	10
	≤ 160	3.9	9.1

Fire protection properties

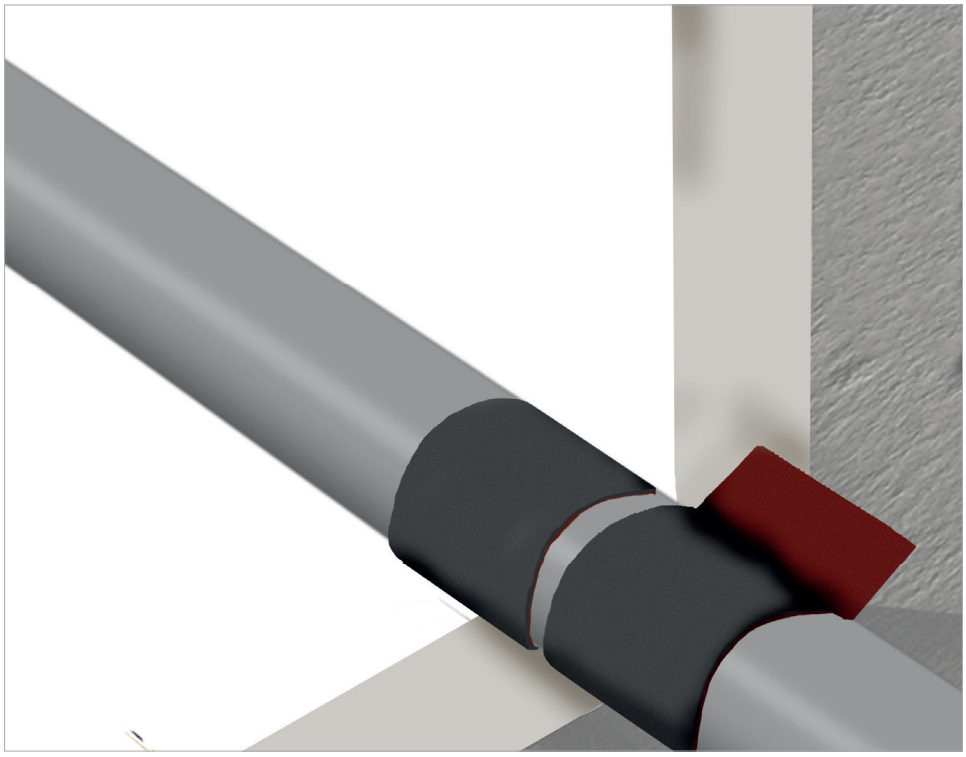
Rapidly foaming fire protection sleeve in case of fire. The foam layer closes the free space between the combustible pipes and the component, and forms an heat-insulating protective layer.

System properties/benefits

- Easy assembly
- Cutting off with scissors or cutting knife possible.
- No width cutting required
- Quick closing of the opening resultant with fire in combustible pipes

PYRO-SAFE® DG-CR BS

Fire protection wrap for combustible pipes



Easy assembly and low space requirement make the fire protection wrap a cost-effective fire protection technology retrofitting of combustible pipes in sealing systems or as individual implementations.
The fire protection sleeve PYRO-SAFE DG-CR BS meets these required protection objectives and can be installed extremely well in cramped conditions.

Fields of application

Fire protection technology encasing of combustible pipes to prevent flashover and smoke from passing in pipe sealing systems, combined sealing systems or individual implementations.

Applicability certificate

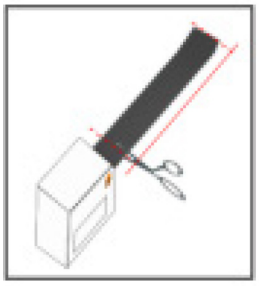
As per European standard (EN)

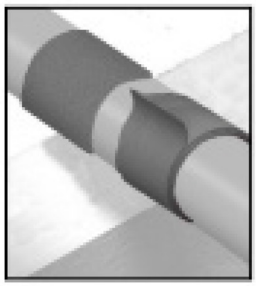
- PYRO-SAFE Flammotect-A
- PYRO-SAFE Novasit BM
- PYRO-SAFE CWM

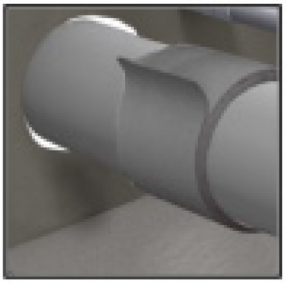
Application

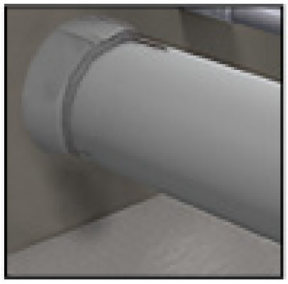
PYRO-SAFE Novasit BM

Placement
(Wall both sides, Floor bottom side): 70 mm in the partition, 30 mm before the partition



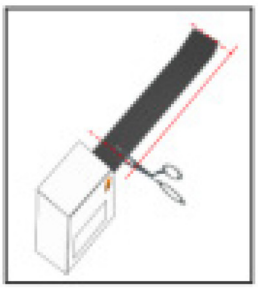


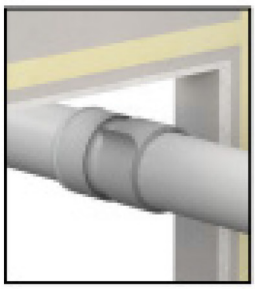


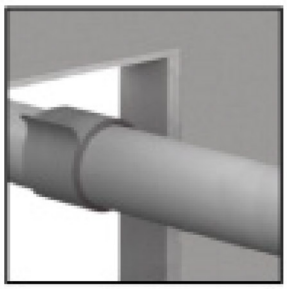


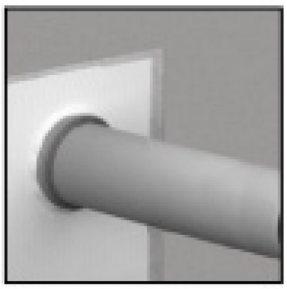
PYRO-SAFE Flammotect-A

Placement
(Wall both sides): 60 mm in the partition, 40 mm before the partition;
(Floor bottom side): 75 mm in the partition, 25 mm before the partition









Required length of wrap per pipe-dia. for wall/floor

Pipe outside dia. [mm]	PYRO-SAFE Flammotect-A		PYRO-SAFE Novasit BM			
					with sound decoupling mat (5 mm PE-Foam)	
	Wall 2 x	Floor 1 x	Wall 2 x	Floor 1 x	Wall 2 x	Floor 1 x
32	11 cm	11 cm	11 cm	11 cm	15 cm	15 cm
40	14 cm	14 cm	14 cm	14 cm	18 cm	18 cm
50	17 cm	17 cm	17 cm	17 cm	21 cm	21 cm
63	43 cm	43 cm	43 cm	43 cm	51 cm	51 cm
75	51 cm	51 cm	51 cm	51 cm	59 cm	59 cm
90	93 cm	93 cm	93 cm	93 cm	105 cm	105 cm
110	112 cm	112 cm	112 cm	112 cm	125 cm	125 cm
125	171 cm	171 cm	171 cm	171 cm	188 cm	188 cm
140	191 cm	191 cm	241 cm	241 cm	262 cm	262 cm
160	218 cm	218 cm	274 cm	274 cm	295 cm	295 cm

safety via technology

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