



Certificate No: IFCC 1029

This certificate certifies that the products below
manufactured by

Pyroplex Ltd

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Satisfies the requirements of IFCC scheme SDP 14. This includes the testing of products to **BS EN: 1366-3: 2009**, the inspection of the Factory Production Control and continuing surveillance audits and testing of samples of products taken from production. The products used as specified will contribute to fire resistance performances of up to **EI240**.

Pyroplex® Pressure Exerting Sealing Systems

The certificate remains valid subject to satisfactory annual surveillance of factory production control by IFC Certification. The reader should contact IFC Certification or refer to www.ifccertification.com to validate its status.



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A handwritten signature in black ink, which appears to read 'Ian Woodhouse'.

Ian Woodhouse
Director of Certification

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Pyroplex® Pressure Exerting Sealing Systems

Pyroplex pressure exerting sealing systems consist of a graphite-based intumescent acrylic sealant which is applied with a mastic cartridge applicator. The sealant expands multi-directionally when exposed to elevated temperatures, exerting pressure to seal and prevent the passage of fire through service penetrations. The product is for internal use only.

Based on the specimens tested, the following scope of approval is available for the Pyroplex pressure exerting sealing systems described within this document:

Plastic pipes

Penetrations comprising a plastic pipe within an individual aperture in rigid walls (150mm or thicker) – penetration seal of minimum 110mm deep mineral fibre wool (96 kg/m³) (centrally aligned within wall thickness) and 20mm deep Pyroplex pressure exerting sealant to both faces. Pipe must be aligned centrally within a circular aperture, to create an equal 'width' of gap/sealant around the pipe.

Penetrating Service Item				
ø82mm aperture in wall			ø53mm aperture in wall	
ø52mm x 4.9mm wall thickness polyethylene (PE) pipe	ø55mm x 2.8mm wall thickness polyvinylchloride (PVC) pipe	ø55mm x 2.2mm wall thickness polyethylene (PE) pipe	ø21.5mm x 2.5mm wall thickness polyvinylchloride (PVC) pipe	ø21.5mm x 4.9mm wall thickness polyethylene (PE) pipe
EI240 (U/C or C/C)	EI240 (U/C or C/C)	EI240 (U/C or C/C)	EI240 (U/C or C/C)	EI240 (U/C or C/C)

*Note: U/C = pipe uncapped on face exposed to fire/capped on unexposed face.
C/C = pipe capped on face exposed to fire/capped on unexposed face.
The penetration seal is only approved for use in these configurations; in accordance with Table E.1 BS EN 1366-3:2009.*

Cables

Penetrations comprising cables within an individual aperture in rigid walls (150mm or thicker) – penetration seal of minimum 110mm deep mineral fibre wool (96 kg/m³) (centrally aligned within wall thickness) and 20mm deep Pyroplex pressure exerting sealant to both faces. Cable bundle must be aligned centrally within a circular aperture, to create an equal 'width' of gap/sealant around the bundle.

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Penetrating Service Item
ø82mm aperture in wall
Bundle of up to 7no. 'A2' type cables
EI240

Cable tray

Penetrations comprising cables on a cable tray within an individual aperture in rigid walls (150mm or thicker) – penetration seal of 2no layers of 50mm thick mineral fibre wool (96 kg/m³), fitted within aperture, to finish flush to both faces of the wall, (with an air-gap in between layers), and with 50mm deep Pyroplex pressure exerting sealant around cable tray and cables.

Penetrating Service Item
200mm wide x 100mm high aperture in wall
Cable tray containing up to 4 no. 'A1' type cables and up to 2 no. 'B' type cables
EI240

NOTES AND LIMITATIONS FOR USE

General

- The blockwork, masonry or concrete walls should have a total thickness of at least 150mm (excluding any plaster render), and a minimum density of 740kg/m³.
- Due to the alignment of the components, the proposed details shall only be used in walls formed as a 'single skin' construction; i.e. not in walls with a cavity.
- The depth of sealant specified herein relates to the depth measured from the face of the concrete/masonry/blockwork. Where the wall is to include cladding, or a decorative plaster, or skim finish, then these finishes must be 'cut-back' locally to the penetration, to leave the sealant exposed.
- In all cases, care must be taken to ensure that the sealant is applied at a consistent "density", and to the correct depth, over the complete area of the penetrations seal; as defined herein.
- All adjacent surfaces of the hole in the wall must be thoroughly clean and free of bond-breaking contaminants prior to application of the sealant. It is recommended that a small area be tested on substrates. The surface of the hole/gap within the associated constructions formed from concrete should be rough cast or 'scabbed'. If the finish to the aperture is cast smooth, due to the surface of any 'former', then the aperture surface must be roughened to provide a key for the sealant and/or mineral rock fibre.

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Penetrations

- Cables/cable trays and pipes shall be independently supported on both sides of the construction element, with supports no more than 300mm from the face of the wall, and using a support system that will remain effective under fire conditions. Cables must be fixed to the cable tray.
- Where cable bundles are approved, the cables shall be closely packed, and tied together.
- Insulation should NOT be fitted to pipes passing through the barrier formed by the penetration seal. If insulation is employed in service, it should be 'cut short' (but still be independently supported) by at least 250mm on either side of the barrier. (It is the responsibility of others to address the requirements of thermal insulation in-service).
- When fitting around single pipes or cable bundles, within individual holes, and if the wall is thicker than 150mm, the depth of the mineral rock fibre backing shall be increased beyond that stated herein, proportional to the wall thickness, so that the sealant is finished flush with the face of the wall. The sealant shall not be 'set-back' from the face of the wall.
- When fitting around single pipes or cable bundles, within individual holes, it must be ensured that the mineral rock fibre fits closely around the service penetration; filling the annular gap, but leaving room for the sealant on each face. The pipe/bundle must be aligned centrally within the circular aperture, to create an equal 'width' of gap/sealant around the pipe/bundle.
- When fitting around cable trays, the detail described in Section 3.3, above, shall be used, and the mineral rock fibre layers shall be friction fitted into the aperture. Each layer should be installed as a single piece, with a rectangular hole for the cable tray; see below. Alternatively, if the mineral rock fibre batt needs to be cut to fit around a cable tray that is already in place, the composite assembly may be assembled from four individual sections, but the individual sections must fit closely together, and be in plane with each other, to form a robust assembly. The individual sections around cable trays may be orientated with vertical and/or horizontal joints, but each section shall 'span' the overall width or height, as applicable, of the aperture in the wall.
- References herein to approved cable types, e.g. A1 or A2, apply to those defined in EN 1366-3:2009. The approval only applies to the cable sizes and arrangements defined herein. No variations are permitted.
- Where approved, cable trays shall be formed from perforated steel sheet, nominally 1mm - 1.5mm thick. Maximum size of cable tray to be 150 x 35mm. The width of tray may be less than 150mm, if fewer cables are installed; subject to the parameters below. The depth of the cable tray shall not be less than 35mm, to allow for sufficient sealant to be applied above the cables.
- Cables on each cable tray may be laid individually, or as one single layer. Cables on a tray shall not be used as a bundle. Although more than one cable may be included on a cable tray, there shall not be more than 4no cables side-by-side in a group, and there shall be a minimum 15mm width gap between

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each 'group' of cables on the tray, and between the outer cables and the sides of the tray.

- The aperture in the mineral rock fibre batts must be formed to match the depth of the cable tray, but the width should allow a 15mm wide layer of sealant to be applied between the sides of the cable tray and the mineral rock fibre batts. The cable tray shall be seated on the mineral fibre layers, and bedded on a layer of sealant. The sealant shall also fill the 'residual void' within the cable tray, closely following the 'profile' formed by the upper surfaces of the cables, whether laid as a single layer or individually, filling the gap between each 'group' of cables on the tray, and between the outer cables and the sides of the tray. The Sealant around the cables/tray shall be aligned with the mineral rock fibre batts.
- There must be at least 15mm width of mineral rock fibre between the sides of the cable tray and the sides of the aperture, and at least 35mm width of mineral rock fibre between the top/bottom of the cable tray and the top/bottom of the aperture.
- The sealant shall be installed in accordance with the manufacturer's installation instructions, and the specifications defined herein.