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| Technical Data Sheet |
| Protecta FR Fire Collars |

Product Description

Protecta FR Collars provide a robust, versatile and economic fire seal to provide fire resistance in compartment walls (including gypsum stud walls) and floors where openings in these construction elements are formed to accommodate plastic service pipes. In a fire attack situation, the intumescent lining within the collar expands to form a robust char barrier which prevents the passage of flames and hot gases through voids created by the melting plastic pipe and in addition restricts temperature rise on the non-fire side of the wall or floor.

Protecta FR Collars are made from corrosion resistant zinc coated steel lined with a water resistant polymer based intumescent material. Protecta FR Collars are supplied in 5 standard sizes, but have been tested 'oversize' on smaller diameter plastic pipes thereby reducing the need to use more costly non-standard sizes. Protecta FR Collars are particularly suitable when pipes are fitted in tight corners (see installation instructions). Protecta FR Collars are also suitable for use when plastic pipes are installed through mineral wool penetration systems, without the need for any additional mechanical fixings.

Physical Properties

| | |
|-------------------------------------|--|
| Composition: | Zinc-coated steel shell with intumescent liner |
| Intumescent activation temperature: | Approximately 180° C |
| Intumescent expansion pressure: | 2.55 bar +/- 0.35 bar |
| Intumescent volume expansion: | 110ml +/- 25ml (for a 1.8mm thick sample) |
| Service temperature: | -15°C - +75°C |

Protecta FR Collars are certified to EN test standards for use with PVC, uPVC, cPVC, PP, PE and ABS pipes.

Protecta FR Collars contain no hazardous materials and are asbestos free' This data sheet should be read in conjunction with the MSDS for this product

Fire Performance

Tested in accordance with:

EN1363-1:1999 & EN1366-3:2004, BS476-Part 20:1987

| <u>Construction</u> | <u>Integrity</u> | <u>Insulation</u> |
|----------------------------|------------------|-------------------|
| Timber/Steel Stud Drywalls | 120 mins | 60 mins |
| Concrete/Blockwalls | 240 mins | 240 mins |
| Concrete Floors | 240 mins | 240 mins |
| Mineral Wool Boards | 90 mins | 90 mins |

Dimensional Data

| <u>Size</u> | <u>To Suit Pipe OD</u> | <u>Height</u> | <u>Shell O/D*</u> |
|-------------|------------------------|---------------|-------------------|
| 55mm | 32-55mm | 50mm | 72mm |
| 82mm | 56-82mm | 50mm | 103mm |
| 110mm | 83-110mm | 50mm | 135mm |
| 125mm | 111-125mm | 60mm | 160mm |
| 160mm | 126-160mm | 60mm | 203mm |

* approx. dimension

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Installation Instructions

Fig A. Surface Mounting to Timber or Steel Stud Drywall

1. A collar is required on both sides of the wall
2. Attach the collar around the pipe and slide firmly up against the plasterboard wall
3. Mark location of fixings and securely fasten collar to both sides of the wall using suitable non combustible drywall anchors

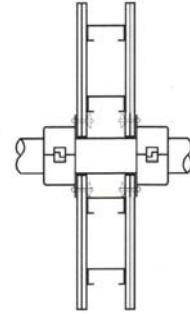


Fig B. Surface Mounting to Concrete Slab

1. A collar is required on the underside of the slab only
2. Attach the collar around the pipe and slide firmly up against the underside of the slab
3. Mark location of fixings and securely fasten collar to slab using suitable non combustible anchors or bolts (recommended 50mm minimum length)
4. If the pipe is tightly fitted into a corner, separate the 2 halves and fit one half of the collar behind the pipe. Once this is securely fastened to the slab, the other half can be attached using the slidelocks and then fixed onto the slab
5. If the surface of the slab is irregular, apply a bead of intumescent mastic around the circumference of the collar before mechanical attachment

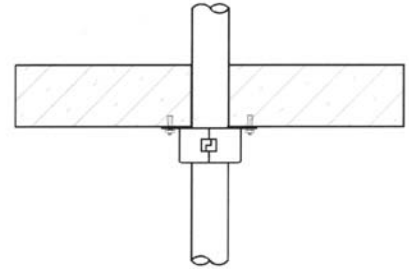


Fig C. Surface Mounting to Concrete/Blockwalls

1. A collar is required on both sides of the wall unless the fire risk is limited to 1 side only
2. Attach the collar around the pipe and slide firmly up against the wall
3. Mark location of fixings and securely fasten collar to both sides of the wall using suitable non combustible anchors or bolts (recommended 50mm minimum length)
4. If the surface of the wall is irregular, apply a bead of intumescent mastic around the circumference of the collar before mechanical attachment

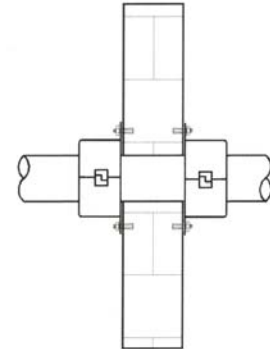
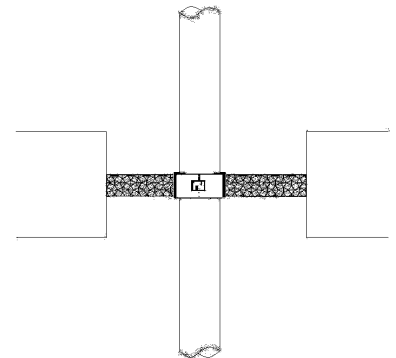


Fig D. Cast-into Mineral Wool Boards

1. The collar should be fitted through the full thickness of the mineral wool board
2. Mark the circumference of the collar shell on the board and cut out the mineral wool around the pipe to accommodate the collar
3. Fasten the collar around the pipe and push tightly into the annular space between the pipe and the board
4. Seal any gaps between the external shell and board with an intumescent sealant



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