Technical Data Sheet

Isover Protect Collar

General Product Description

Isover Protect Collars are designed to maintain the fire resistance of fire rated walls and floors where these are breached by service penetrations, and may be used in drywalls, timber, masonry or concrete walls and floors.

Each collar consists of a white or red coated circular steel shell that splits in two to fit around the service penetrations by means of a simple 'slide-lock' system. The steel shell contains a graphite based reactive material which reacts when exposed to heat from fire closing the openings left by the softening combustible material.

Properties & Precautions

- High end fast expanding patented graphite material, certified Worldwide
- Classified for fire sealing all types of constructions such as drywalls, masonry and concrete walls, concrete and composite floors, and solid or cross-laminated timber walls and floors
- Classified for fire sealing all types of building service penetrations such as cable bundles, cable conduits, steel pipes, copper pipes, alupex pipes, composite pipes, PVC pipes, PE pipes, ABS pipes, PP pipes, PEX pipe-in-pipes and rectangular plastic ducts
- Metal and plastic pipes are classified with commonly used combustible pipe insulations, continuous through the fire seal
- Approved plastic pipe sizes range from smallest pipes available to Ø 400mm, each with a wide range of pipe wall thicknesses
- Approved with a single collar in some concrete and masonry wall applications, reducing cost
- Smaller pipes can be fitted within larger collars with the benefit of accommodating pipes that are at an angle, or if the opening around the pipe is too large
- Where services are placed directly against a wall of a floor, half a collar shell may be used
- Collars may be fixed with adhesive, where there are no access to use screws
- Fire classifications up to 240 minutes for both integrity and insulation
- Tested and certified for U/U pipe end applications
- Very high sound insulation

- Causes no deleterious effects on cPVC pipes like BlazeMaster, supported by mechanical testing evidence
- No emissions - environmentally and user friendly
- Simple to install using widely available standard fixings
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

Sound Insulation

Description	Sound reduction
Collars installed as described	Rw 58 dB

The sound insulation value is only valid for the collar/pipe/seal and not for other elements in the building construction. Tested according to EN ISO 10140-2:2010.

Plastic Pipes

Where PVC pipes are mentioned in the Installation Instructions, this includes PVC-U, PVC-C and similar if the pipe is according to EN 1329-1, EN 1452-2, EN 1453-1 or EN 1566-1.

Where PP pipes are mentioned, this includes PP-MV, PP-H, PP-R and similar if the pipe is according to EN 1451-1 or DIN 8077/8078.

Where PE pipes are mentioned, this includes PE-LD, PE-MD, PE-HD, PE-X and similar according to EN 1519-1, EN 12201-2 or EN 12666-1, ABS according to EN 1455-1 and pipes made from SAN+PVC according to EN 1565-1.

Pipe End Configurations

When testing pipes, one can choose not to cap (or close) the pipe, or cap the pipe inside the furnace, or outside the furnace, or on both sides. The configuration chosen depends on the intended application of the pipe and/or the installation environment.

The code defining if a pipe is capped is stated after the fire classification. For instance, EI 60 C/U which means the pipe was capped inside the furnace, and uncapped outside the furnace. The test configuration defines the approvals possible.

The producer's engineering judgement based on EN 1366-3:2022 is:

Intended use of pipe		Pipe end condition [3]
Rainwater pipe, plastic	At drainage	U/U [1]
	Not at drainage	C/C [2]
Drainage or sewage pipe, plastic	Ventilated drain	C/U [1]
	Unventilated drain	U/C [2]
	Drain w/water trap	U/C [1]
	Not at drainage	C/C [2]
Metal or plastic pipe in closed system (water, gas, air etc.)		C/C [1]
Metal pipe in ventilated system (sewage etc.)		U/C [1]
Flue gas recovery system pipe, plastic		U/C [1]
Pipe with open ends and ≥ 50cm length on both sides, plastic		U/U [2]
Waste disposal shaft pipe, metal		U/C [2]

1) Suggested in EN 1366-3:2022. 2) Producer's judgement based on tests.
3) 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.

Analysis of cPVC Pipes e.g. BlazeMaster

Analysed using Fourier Transform Infrared (FTIR) Spectroscopy; examination of the sealant contact regions of the cPVC pipe after removal of Isover Protect Acrylic (used in combination with Isover Protect Collar) showed no evidence of visible discolouration or changes at the pipe surface.

Isover Protect Acrylic has also been tested for chemical resistance of a sealant when applied to a cPVC pipe. The sealant does not affect cPVC pipes; the tests showed no difference between the control and exposed results at Yield.

Technical Data

Condition	Ready for use, steel shell with a graphite material
Shell	Powder coated 1mm steel
Conditioning procedure	EN 13238:2010
Expansion ratio	1:17
Expansion pressure	65.4 N
Graphite weight	1.4 kg/m² per mm thickness
Graphite density	1409 kg/m³
Normal expansion time	Less than 2 minutes
Minimum expansion temperature	105 °C
Durability	Z_2 intended for use in internal conditions with humidity classes other than Z_1, excluding temperatures below 0 °C.
Life	Under normal conditions; 30 years +
Storage	May be stored for a long period of time. To be stored in temperatures between 5 °C and 30 °C
Installation temp.	+5 °C to +50 °C (sealant) and -20 °C to +50 °C (collar)
Service temp.	-20 °C to +70 °C (sealant) and -40 °C to +80 °C (collar)
Colour	White or red shell with anthracite inlay

Sizes & Packaging

Product diameter & height	pcs/box
Isover Protect Collar Ø 32/50 mm	24 (70 boxes per pallet equals 1680 pcs)
Isover Protect Collar Ø 40/50 mm	24 (70 boxes per pallet equals 1680 pcs)
Isover Protect Collar Ø 55/50 mm	24 (70 boxes per pallet equals 1680 pcs)
Isover Protect Collar Ø 63/50 mm	24 (45 boxes per pallet equals 1080 pcs)
Isover Protect Collar Ø 75/50 mm	24 (45 boxes per pallet equals 1080 pcs)
Isover Protect Collar Ø 82/50 mm	24 (45 boxes per pallet equals 1080 pcs)
Isover Protect Collar Ø 90/50 mm	24 (25 boxes per pallet equals 600 pcs)
Isover Protect Collar Ø 110/50 mm	24 (25 boxes per pallet equals 600 pcs)
Isover Protect Collar Ø 125/60 mm	20 (24 boxes per pallet equals 480 pcs)
Isover Protect Collar Ø 140/60 mm	12 (16 boxes per pallet equals 192 pcs)
Isover Protect Collar Ø 160/60 mm	12 (8 boxes per pallet equals 96 pcs)
Isover Protect Collar Ø 200/60 mm	2 (24 boxes per pallet equals 48 pcs)
Isover Protect Collar Ø 250/75 mm	2 (24 boxes per pallet equals 48 pcs)
Isover Protect Collar Ø 315/75 mm	2 (8 boxes per pallet equals 16 pcs)
Isover Protect Collar Ø 400/100 mm	1 (8 boxes per pallet equals 8 pcs)

Collars ≤ Ø 160 mm could be available in white and red.

Test Standards

This Technical Data Sheet and the Installation Instructions are based on the product's ETA issued in accordance with regulation (EU) No 305/2011 on the basis of EAD 350454-00-1104, September 2017, tested to EN 1366-3 in conjunction with EN 1363-1. The product hold the following approval marks; CE-mark for Europe.

Quality Assurance

As a part of our policy of on-going product development and testing, we reserve the right to modify, alter or change product specifications without giving notice. All information contained in this document is given in good faith and is provided for guidance only. Any drawings provided are for illustrative purposes only.
As Saint-Gobain Isover has no control over the methods or competence of installation and of prevailing site conditions, no warranties, expressed or implied, are intended to be given as to the actual performance of the product mentioned or referred to herein and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given.

Technical data sheet to ETA 24/0372

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