



## Technical Data Sheet

# Isover Protect Acrylic

### General Product Description

Designed to prevent the spread of fire and smoke through joints and openings in fire rated walls and floors (including openings formed around building service penetrations); Isover Protect Acrylic will also maintain acoustic design performance.

When subjected to atmospheric conditions, the sealant cures however, it will retain a degree of elasticity for joint movement. Under fire exposure, Isover Protect Acrylic creates a robust fire seal by the formation of a durable intumescent char.

Isover Protect Acrylic can be used with a suitable filling material i.e. stone wool backing material in order to secure correct width to depth ratio, and to reduce the shrinking of the sealant during curing. Minimum depth and maximum width of the joints are included in the installation instructions. Thermal activation takes place at approx. 180°C when the material will expand (intumesce) and prevent the passage of fire and smoke for periods up to and beyond 4 hours.

### Properties

- High end formula, certified in most countries Worldwide
- Faster application times and minimal material use due to its ability to achieve high fire ratings and single sided installations
- Classified for fire sealing all types of constructions such as drywalls, masonry walls, concrete walls, concrete floors and composite floors
- Classified for fire stopping of service penetrations in cross-laminated timber walls and floors
- Classified for fire sealing all types of building service penetrations such as cables, cable bundles, cable conduits, steel pipes, copper pipes, composite pipes, PVC pipes, PE pipes, ABS pipes, PP pipes and PEX pipe-in-pipes
- Classified with commonly used pipe insulations such as stone wool, glass wool, elastomeric, phenolic and PU-foam, both interrupted and continuous through the fire seal
- Classified for fire sealing against timber, steel and aluminium such as door and window frames

- Causes no deleterious effects on cPVC pipes like BlazeMaster, supported by mechanical testing evidence
- May be installed in drywalls with or without framing around the opening
- Very high sound insulation
- Not power conductive
- Air, smoke and gas tight, tested at 600 Pascal
- Available in the Eco-Foil system
- Low emissions - environmentally and user friendly
- Simple to apply with a smooth surface finish
- No priming necessary for application to most materials
- Suitable for most surfaces, including concrete, masonry, steel, gypsum, glass, plastics and most nonporous surfaces
- Hardens quickly and tack free after 1 hour (the fire performance specification of the joint filler has been derived when the joint filler has been let to cure for a month)
- Minimum 24 months storage time (under correct conditions)
- Minimum 30 years working life

## Emissions Data (Indoor Air Quality)

Regulation or Protocol	Conclusion
French VOC Regulation	Pass/A+
Italian Regulation (public procurement)	Pass
German AgBB (2021)/ABG (2022)	Pass
Belgian Regulation	Pass
EMICODE	Pass/EC 1 PLUS
Blue Angel (DE-UZ 123)	Pass
BREEAM-International	Pass/Exemplary Level
BREEAM UK	Pass/Exemplary Level
BREEAM NL	Pass/Exemplary Level
BREEAM-NOR	Pass/Exemplary Level
Finnish M1 Classification	Pass/M1
SINTEF	Pass
Byggarubedömningen	Pass
DICL	Pass/Emission Class 1
ECOproduct	Pass/Very Low Emitting
WELL (EU)	Pass
LEED-EU (v4.1) BETA	Pass

## Sound Insulation

Description	Sound reduction
Single sided seal $\geq 12$ mm depth	Rw 62 dB
Double sided seal $\geq 12$ mm depth	Rw >62 dB

Tested according to EN ISO 10140-2:2010. Usage of any backing material is optional, due to the tests being conducted with sealant only.

## 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 <sup>3)</sup>
Rainwater pipe, plastic	At drainage	U/U <sup>1)</sup>
	Not at drainage	C/C <sup>2)</sup>
Drainage or sewage pipe, plastic	Ventilated drain	C/U <sup>1)</sup>
	Unventilated drain	U/C <sup>2)</sup>
	Drain w/water trap	U/C <sup>1)</sup>
	Not at drainage	C/C <sup>2)</sup>
Metal or plastic pipe in closed system (water, gas, air etc.)		C/C <sup>1)</sup>
Metal pipe in ventilated system (sewage etc.)		U/C <sup>1)</sup>
Flue gas recovery system pipe, plastic		U/C <sup>1)</sup>
Pipe with open ends and $\geq 50$ cm length on both sides, plastic		U/U <sup>2)</sup>
Waste disposal shaft pipe, metal		U/C <sup>2)</sup>

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 the sealant 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.

### Air Permeability

Positive Pressure (Pa)	Leakage (m <sup>3</sup> /h/m <sup>2</sup> )	Negative Pressure (Pa)	Leakage (m <sup>3</sup> /h/m <sup>2</sup> )
25	0.00	25	0.00
50	0.00	50	0.00
100	0.00	100	0.00
200	0.00	200	0.00
300	0.00	300	0.56
450	1.11	450	1.67
600	6.94	600	6.11

Tested according to EN 1026: 2016.

## Technical Data

<b>Condition</b>	Ready for use, acrylic based filler
<b>Specific gravity</b>	1.58 - 1.64
<b>Flash point</b>	None
<b>Reaction to fire</b>	B - s1, d0
<b>Air permeability</b>	Air, smoke and gas tight tested to EN 1026: 2016
<b>Expansion in fire</b>	1 : 2-3
<b>Non-sticky</b>	Max. 75 minutes
<b>Film forming</b>	Max. 25 minutes
<b>Totally hardened</b>	3 to 5 days depending on thickness and temperature
<b>Flexibility</b>	12.5% in mortar/concrete/masonry to EN ISO 9046
<b>Durability</b>	Z <sub>2</sub> intended for use in internal conditions with humidity classes other than Z <sub>1</sub> , excluding temperatures below 0 °C
<b>BWR 3</b>	Use category IA1, S/W3
<b>Electrical conductivity</b>	None (tested)
<b>Thermal conduct.</b>	0.845 W/mK (+/- 3%) @ 20mm depth
<b>Storage</b>	24 months stored in unopened cartridges. To be stored in temperatures between 10 °C and 30 °C
<b>Working life</b>	30 years
<b>Service temp.</b>	-20 to +70 °C
<b>Application temp.</b>	+5 to +30 °C
<b>Compatibility</b>	Suitable for use with most materials, but should not be used in direct contact with bituminous materials
<b>Limitations</b>	Should not be used in permanently damp areas or in joints with high movement
<b>Standard colours</b>	Standard white
<b>Colour codes</b>	White: RAL 9002 / NCS S1002-Y
<b>Packaging</b>	Box containing 25 foils/cartridges each 300/310 ml Box containing 12 foils packed each 600 ml Pallets 310 ml cartridges: 80 boxes per pallet equals 2000 pcs Pallets 300 ml foils: 60 boxes per pallet equals 1500 pcs Pallets 600 ml foils: 91 boxes per pallet equals 1092 pcs

## Test Standards

This Technical Data Sheet and the Installation Instructions are based on the product's ETAs issued in accordance with regulation (EU) No 305/2011 on the basis of EAD 350454-00-1104, September 2017 and EAD 350141-00-1106, September 2017, tested to EN 1366-3, -4 & -12 in conjunction with EN 1363-1. The product holds 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 24/0364, ETA 24/0365