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Description

Protecta® FR IPT is a high performance, professional quality, one part ready to use sealant and adhesive. Based on an innovative new Inert Polymer Technology it is suitable for a wide variety of building trade applications including decorating, flooring, joinery, plumbing and tiling and out-performs conventional silicone, MSP, butyl and acrylic based products as a sealant and adhesive – the only sealant free from dangerous emissions.

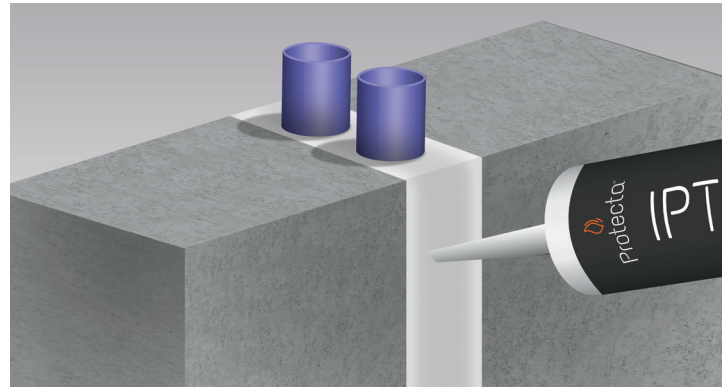
IPT is a non-reactive environmentally friendly chemistry that ensures compatibility with most building materials and has the unique property of moving dynamically to accommodate the natural or unexpected movements of sealed/bonded joints within a building, for long-lasting performance.

Protecta® FR IPT eliminates the selection choices that need to be made with conventional sealants and adhesives. Choosing a product for a building application can be confusing especially as there are a wide number of products available and within those products a variety of grades, with variations in properties to suit the substrate or application. Protecta® FR IPT overcomes this by offering the tradesman one solution for all internal building applications.

Substrates

Protecta® FR IPT is designed for sealing joints, voids/irregular holes in walls, partitions and other structures, resulting in an airtight and watertight seal. Protecta® FR IPT provides primerless sealing and bonding on a wide range of substrates including:

- Ceramic
- Plaster
- Plastics
- Masonry
- Wood
- Stone
- Metals



Properties

Protecta® FR IPT remains permanently flexible and is paintable with both alkyd resin and water based paints.

Suitable applications include:

- Internal sealing around doors and windows
- Sealing where air quality for health is important
- Sanitary applications including showers
- Sealing of gaps around fitted furniture and worktops
- Sealing around flooring
- Fire resistant sealing
- Radon resistant sealing
- Decorating caulking and sealing
- Air and sound sealing

Protecta® FR IPT can be used as an adhesive and has excellent initial grab quickly developing a high bond strength resulting in a permanent fixing. It is easy and economical to apply and is ideal for general construction.

fixing and bonding.

Protecta® FR IPT bonds to most building materials.

Substrates include:

- Brick, concrete, stone, slate, ceramic, marble, granite
- Timber, plywood, block board, chipboard, fibreboard
- uPVC plastic trims and polycarbonate
- Insulating board
- Expanded polystyrene
- Plasterboard and plaster
- Metals, aluminium, steel, lead, copper and alloys
- Painted surfaces

Surplus uncured material can be easily removed using a damp cloth as the uncured sealant is completely soluble in water.



Features

- Primerless adhesion
- Excellent adhesion to most common substrates
- Dynamic for low and high modulus applications
- Fast cure - max bond strength is attained in 24 hours
- 3D joint movement capability minimum 25%
- Can be used for all applications internally
- Fire rated up to 4 hours both integrity and insulation
- Resistant against radon (radioactive particles)
- Recommended for use in joints up to 20mm wide, larger joints widths can be accommodated
- Excellent slump resistance
- Only technology available that is VOC free
- Resistant to mould and mildew
- Low dirt pick up
- Non staining on susceptible surfaces
- Easy to apply and tool off
- Excess can be wiped before curing with a damp cloth
- Paintable
- Low shrinkage
- Does not yellow
- Compatible with a wide range of substrates

Limitations

- Where metals are not compatible with water contact, they should be primed prior to any sealant application.
- The sealant is soluble in water in wet/uncured state and cannot be used submerged or in rain. Applied sealant must not be sprayed with water or other fluids before skin formation (<30 min).
- The sealant should not be used outdoors due to the design of the curing process technology.
- Very narrow seals cure faster than normal. There is a special version of IPT that cures more slowly.

Application Instructions

All surfaces must be clean and sound, free from dirt, grease and other contaminants. The surfaces may be damp but not running wet. Use a wet brush to clean surfaces before application to remove loose material and to ensure good contact for adhesion. Primers are not usually required.

In order to obtain maximum performance as a sealant the depth of the joint should be at least half the width and not less than 6mm. The use of backing material is strongly recommended e.g. polyethylene backer rod or mineral wool.

Cut nozzle to the desired angle and gun firmly into the joint to give a good solid fill. Strike off the sealant flush with the joint sides within ten minutes of application, before surface skinning occurs. The sealant will have medium shrinkage during cure and if a flush surface it is recommended to leave the sealant proud.

The sealant can be tooled to a smooth finish using a moist plastic stick or similar within 30 minutes of application. IPT Tooling designed for the optimum finish is recommended instead of soap and water as it forms a film between the stick and the sealant.

Do not spray the sealant with water or other fluids before skin formation (<30 min). Uncured sealant is soluble in water prior to skinning due to its environmentally friendly IPT chemistry that uses water instead of solvents.

Fire Classification

Protecta® FR IPT maintains integrity of a joint in a fire situation giving a minimum 4 hours as long as the surrounding construction remains intact.

Both the sealant and the backing material must be applied to a minimum depth to achieve the stated fire resistance. The type of backing material must be as specified.

Joint with width ≤ 30 mm	Backing material	Fire Resistance
Concrete, masonry and gypsum walls 100mm thick		
Double sided seal ≥ 12,5mm depth	Stonewool ≥ 12,5 mm depth	EI 120
Concrete floors 150mm thick		
Double sided seal ≥ 15mm depth	Stonewool ≥ 20mm depth	EI 240
Single sided seal ≥ 25mm depth (on top)	Protecta Backing ≥ 48mm depth	EI 180



Emission data (indoor air quality)

Compound	Emission rate after 3 days	Emission rate after 4 weeks
TVOC	7,7 µg/m ³	< 5 µg/m ³
TSVOC	n.d.	n.d. (< 5 µg/m ³)
VOC w/o NIK	n.d.	n.d. (< µg/m ³)
R Value	< 1	< 1
Formaldehyde	< 3 µg/m ³	< 3 µg/m ³
Acetaldehyde	< 3 µg/m ³	< 3 µg/m ³
Sum for+ace	< 0,002 ppm	-
Carcinogenic	n.d. (< 1 µg/m ³)	n.d. (< 1 µg/m ³)
n.d. = not detected		

IPT complies with the requirements of GEV and the results correspond to the EMICODE emission class EC1^{PLUS} which is the best possible environmental and indoor hygiene health protection mark.

IPT is the only technology available with no dangerous emissions during usage and curing.

Tested by Eurofins Product Testing, report number G17798A.

Usage

Usage for a standard 300ml cartridge.

Joint size (mm)	6x6	9x6	12x6	25x10	7x7 fillet	10x10 fillet
Linear metres/cartridge	8.63	5.5	4.1	1.2	12.0	6.0

Sound Insulation


Description	Sound reduction
Single sided seal ≥12mm depth	62 dB
Double sided seal ≥12mm depth	> 62 dB

Protecta® FR IPT has been tested at BM Trada (UKAS accredited); according to EN ISO 10140-2:2010.

Usage of any backing material is optional, due to the tests being conducted with sealant only.



Technical Data

FROM:	Ready to use thixotropic paste
Specific gravity:	1,54 g/cm ³
VOC:	0 g/l
Durability w/ageing:	Type X (UV / water) (pass)
Chemical resist.	Test passed (resistant)
Salt water immersion:	Test passed (resistant)
Microbiologic growth:	0 (no growth)
Hardness:	Shore A 47
Shrinkage:	15% volume single sided
Tensile properties:	3,79 MPa (379 N/mm ²)
Tensile elongation:	270%
3D-tensile prop.:	0,24 MPa (24 N/cm ²)
3D-tensile elong.:	106%
Tear properties:	50%
Compression resist:	434 N / 1569 MPa
Radon resistance:	1.5mm thickness IPT gives Z = 2.9 108 s/m
Flashpoint:	None
Reaction to fire:	Classification D-s2, d0
Fire resistance	Up to class EI 240
Tack free time:	60 minutes maximum
Skin time:	30 minutes maximum
Rate of cure:	10% at 24 hours
Solids content:	> 80%
Resistance to flow:	< 0.5 mm
shelf life:	Up to 24 months when stored in unopened cartridges under cool dry conditions and 6 months in opened and resealed cartridges. Avoid temperatures above 35°C & below 5°C.
Frost:	Uncured sealant should not be frozen.
Thermal Conductivity:	0,845 W/mK (+/- 3%) at 20mm depth (to EN 12667).
Compatibility:	Can be used in contact with most building and decorating materials.
Service Temp:	40°C to +75°C
Classification 	Facade (interior) 25LM Sanitary joints XS1

Colours: A range of colours are available. Standard colours are white, light grey, grey, anthracite, black and brown.

Packaging: 200ml flexitube, 300ml and 380ml cartridge or 600ml foil.

Health & safety: No health hazard, indoor hygiene EMICODE EC1^{PLUS} classification, approved for BREEAM rated building projects. See safety data sheet.

Test laboratories: SP Sveriges Provningsverk, SE Intertek Chemicals & Phar., GB BM Trada, GB Eurofins Product Testing, DK .

Responsible: Protecta® Sealant & Adhesive manufactured by Polyseam Limited in UK
Phone +44(0)1484 421036.

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