

FireStop Intumescent 680

SELLADOS CORTA FUEGO

PRODUCT DESCRIPTION

PENOSIL FireStop Intumescent 680 is a one-part, intumescent, elastomeric putty based on acrylic resins.

In contact with fire, PENOSIL FireStop Intumescent 680 forms an inorganic crust which is unaffected by fire (intumescent), providing an insulation fire barrier and stopping the passage of smoke and flames through the sealed joint.

MAIN BENEFITS

- Withstands fire for 3 hours in lineal joints and 4 hours in piping.
- Prevents the passage of fire and hot gases.
- Halogen, solvent and asbestos free.
- Water base. No odour.
- Highly flexible and water resistant.
- Paintable after curing.
- Adhesion to most common building substrates.
- Durable. Permanently flexible.

PRODUCT CERTIFICATIONS

PENOSIL FireStop Intumescent 680 meets the following specifications:

- ISO 11600-F 7,5P
- CE Marking: EN 15651-1 F-INT
- UKCA Marking: BS EN 15651-1 F-INT
- Fire Resistance classification: 4 hours according to EN:13501-2.
- Tested according to EN:1366-4 "Fire resistance test for service installations. Part 4: Linear joint seals". (TECNALIA)
- Tested according to EN:1366-3 "Fire resistance test for service installations. Part 3: Penetration seals" and to the standard EN:1363-1 "Fire resistance tests. Part 1: General Requirements" (APPLUS)

ENVIRONMENTAL REGULATIONS

- French VOC-emission class A+.

PACKAGING INFORMATION

This product is available in 300 ml cartridges (24 u./box, 56 boxes/pallet).

* European pallets: 120x80 cm

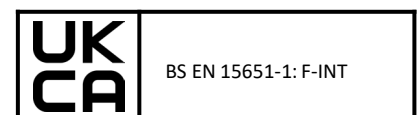
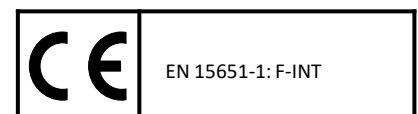
Other packaging is available under request.

COLOURS INFORMATION

White.

STORAGE

The shelf life is 12 months in its unopened original packaging, in dry conditions at temperatures between +5°C and +30°C.



* Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

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FIELDS OF APPLICATION



Interior joint seals where a low movement and passive fire protection is required, for example:

- Joints in slabs, walls, fire walls, partition walls, door and window frames, etc.
- Sealing of gaps around pipes, cables, ducts, services and small openings which penetrate firewalls and floors.
- Filling gaps in concrete and plaster, to protect from fire and smoke.

TYPICAL TECHNICAL DATA

Basis:		Acrylic Dispersion
Consistency:		Non-slump paste
Specific gravity:	(ISO 2811-1)	Approx. 1,56 g/ml
Skin forming time:	(OQ.16-internal)	20-30 minutes (at 23°C; 50% R.H.)
Curing rate:	(OQ.18-internal)	2-3 mm/24 h
Resistance to flow:	(ISO 7390)	≤ 3 mm (at 5°C and 50°C)
Movement capability:	(ISO 11600)	± 7,5%
Loss of volume:	(ISO 10563)	≤ 25%
Shore A hardness:	(ISO 868)	Approx. 20
Application temperature:		+5°C to +40°C
Service temperature:		-20°C to +80°C
<u>Tensile properties:</u>		
ISO 37 (2mm thickness, S2 dumbbells, 7 days, 23°C;50% R.H.)		
E-Modulus 100%		0,15 MPa
Tensile strength		0,20 MPa
Elongation at break		300%

These values may vary depending on environmental factors such as temperature, moisture, and type of substrates. The time until complete curing may be extended at lower temperature, lower humidity or increasing film thickness.

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FIRE RESISTANCE

TABLE 1 – Tested according to EN:1366-4 “Fire resistance test for service installations. Part 4: Linear joint seals” (TECNALIA)

Joint dimensions		Backing material	Orientation	Classification according to EN 13501-2	Report Nº
Width (mm)	Depth (mm)				
10	8	MW	Vertical	E 180 EI 180 V-X-F-W 10 a 10	27874-2-3

Test sample configuration / Tests applicable to lower dimensions

Legend: MW: Mineral wool - Fiberfoc

V: Vertical supporting construction – vertical joint

T: Vertical supporting construction – horizontal joint

X: No movement

F: Field (joint made following real conditions)

W: Joint width

TABLE 2 – Tested according to EN:1366-3 “Fire resistance test for service installations. Part 3: Penetration seals” (APPLUS)

A) PVC piping: 92 mm Ø outside / 32 mm Ø inside. Thickness of wall system: 3,0 mm *

B) PVC piping: 130 mm Ø outside / 50 mm Ø inside. Thickness of wall system: 3,0 mm *

Thickness Intucryl (mm)	Thickness (mm)	Thickness Intucryl (mm)	Classification according to EN 13501-2	Report Nº
30 (A)	140	30	EI 240 - U/U ** E 240 - U/U **	22/32301562
30 (B)	140	30	EI 120 - U/U ** E 240 - U/U **	22/32301562

Test sample configuration / Tests applicable to lower dimensions

* Type of service material: PVC-U EN 1329-1. Total length of sealing system 200 mm

** Pipe end configurations: U: Uncapped (both inside and outside the furnace) / Tests applicable to lower diameter

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DIRECTIONS FOR USE

Surface preparation and application

A. Cleaning and joint preparation:

Substrates (joint flanks) must be clean, dry, and free of dust, grease and other contaminant which may affect the adhesion. Non-porous surfaces (such as aluminium, glass, etc.) should be cleaned with a suitable solvent and thoroughly dried with a clean cloth. Porous substrates (such as concrete, brickwork, etc.) must be mechanically cleaned from loose particles. If necessary, the adjacent surfaces of the joint should be protected with masking tape to avoid staining.

B. Primer:

PENOSIL FireStop Intumescent 680 adheres to most common construction materials without primer, however, a preliminary adhesion test is recommended on every surface. Sometimes, it may be necessary to treat the joint surfaces with a primer to obtain better adhesion performances. Please, contact us for technical assistance.

C. Inserting backing material:

In wider joints, use the closed cell polyethylene backer foam PENOSIL Backer Rod PE 450 as a back-up material to ensure the sealant joint's correct thickness, to limit the sealant joint depth and to avoid three-sided adhesion. Choose the right backing strip diameter (at least 25% wider than the joint width).

D. Intumescent putty application:

After substrate preparation, apply the putty in the joint by repeatedly and evenly with a professional caulking gun. Observe the eventually used primer's open time before filling the joint.

E. Tooling and finishing:

The joint should be tooled and smoothed before skin formation. Press the sealant and smooth it ensuring good contact with the surfaces to seal. Use neutral soapy water as a tooling agent and remove excess material. Remove masking tape.

Uncured product may be easily removed with warm water. Cured sealant must be removed mechanically.

Remarks

Do not use PENOSIL FireStop Intumescent 680 on bituminous substrates or on building materials which might bleed oils, plasticizers or solvents (e.g. rubber, chloroprene, EPDM, ...).

Do not use for continuous immersion in water.

PENOSIL FireStop Intumescent 680 should not be applied when exposure to rain is likely within 24 hours of application.

Not recommended for food direct contact applications.

There is no adhesion to PE, PP, PTFE (Teflon®). In cases of unknown materials, adhesions tests are recommended.

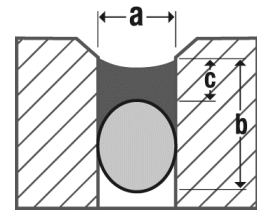
PENOSIL FireStop Intumescent 680 can be overpainted. Due to the large number of paints and varnishes available we strongly suggest a compatibility test before application.

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Joint design

Expansion joints should be correctly dimensioned taking account of dimensional changes in the substrates due to thermal fluctuations. Joint's dimensions should match with the sealant movement capability.

Use closed cell polyethylene backer foam PENOSIL Backer Rod PE 450 as a back-up material to limit the sealant joint depth and avoid three-sided adhesion.



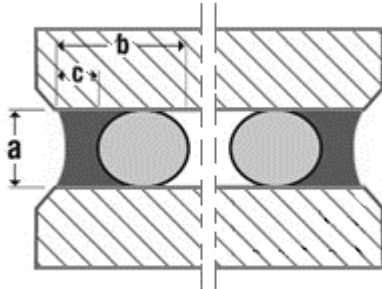
Joint dimensioning

- a* Joint width
- b* Joint depth
- c* Sealant depth
- Sealant
- Backing material

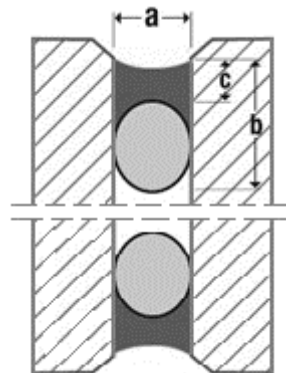
The following general rules/recommendations should be followed

General statement:	The ideal joint has a 2:1 (width:depth ratio)
Minimum joint dimensions:	5-6 mm width x 5-6 mm depth
Up to 12 mm wide:	width = depth
From 12 mm to 24 mm wide:	depth = $\frac{1}{2}$ width
Wider than 24 mm:	depth = 12-15 mm

WALL APPLICATION



SLAB APPLICATION



Safety

Uncured product has to be used in well ventilated areas, avoiding skin and eye contact. Keep out of the reach of children.

The information regarding the safety of the product is available on safety data sheet (SDS). Before using the product, we recommend to read carefully the SDS and the safety labels.

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GUARANTEE INFORMATION

WOLF GROUP warrants that its product complies, within its shelf life, to its specification.

If any responsibility were to be considered ours, this would be only for any damages and for the value of the merchandise supplied by us and used by the customer. It is over understood that we warranty the irreproachable quality of our products in accordance with our General Conditions of Sales and Supply.

Liability

The information in this document, in particular recommendations regarding the application and final use of our products, are given in good faith based on our knowledge and is the result of tests and experience and are intended as guidelines. It is the responsibility of the user to determine whether the product is suitable for the application. Due to the great variety of materials and conditions, which are beyond our knowledge and control, we recommend carrying out sufficient previous trials.

The property rights of third parties must be respected.

TECHNICAL DATA SHEET
Penosil FireStop Intumescent 680
v01 - 04.2023

This TDS replaces and supersedes all previous data sheets on the same product.

[penosil.com](https://www.penosil.com)