

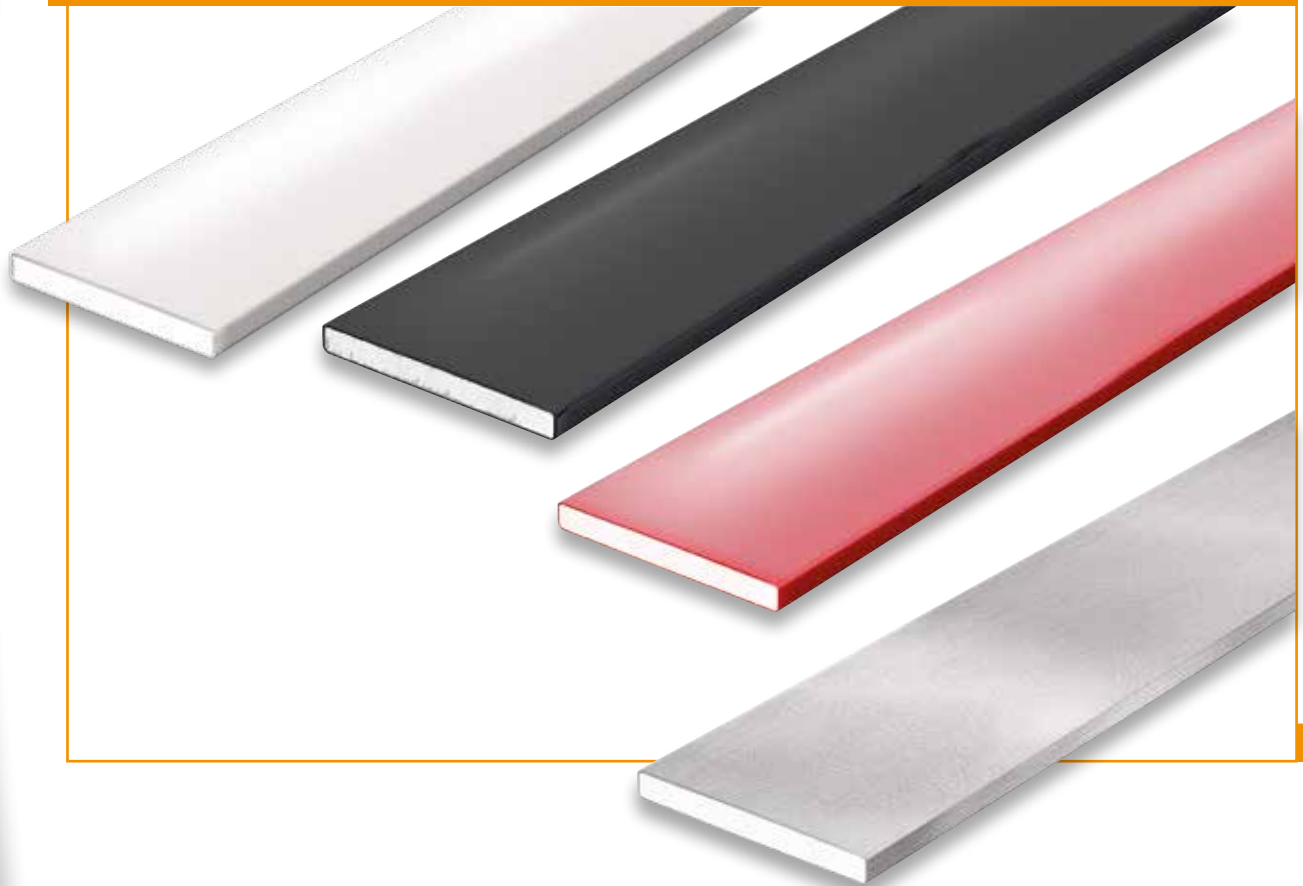
Data sheet



Intumescent fire seals

US / 1.2 / Rev. 2

PALUSOL[®] PL & PL ALU



odice
PASSIVE FIRE PROTECTION

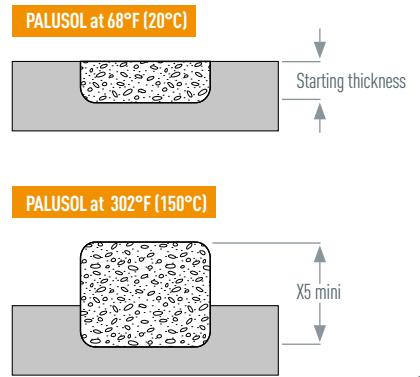


Product description

PALUSOL PL is an intumescent fire seal made from in **PALUSOL**, a hydrated sodium silicate material, encapsulated in a vinyl film or an aluminium foil for the **PALUSOL PL ALU** version.

When exposed to fire, **PALUSOL PL** and **PALUSOL PL ALU** are activated at a temperature of between 212°F and 248°F (100°C and 120°C), the vinyl or aluminium runs and a rigid, non-combustible foam is formed which offers a high level of thermal insulation.

In contact with heat, the intumescent material expands in one direction to at least five times its initial thickness. The expansion pressure thereby generated can reach 218 PSI (1,5N/mm²). This provides an effective barrier preventing the escape of any flames, smoke or hot gases around the perimeter of a fire resistant element which is sealed in this way.



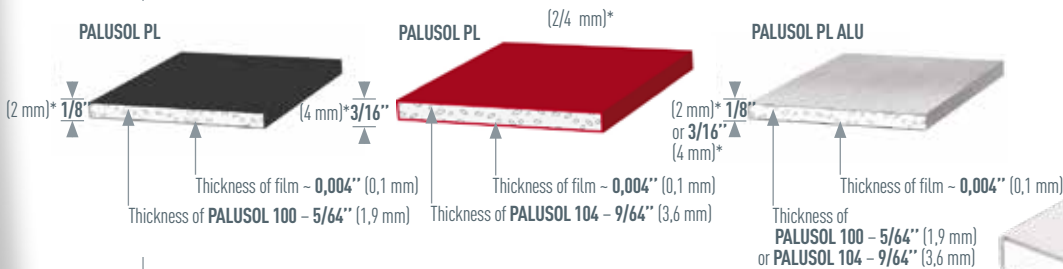
Features

In interior applications, the vinyl film and the aluminium foil extend the service life of the **PALUSOL PL** and **PALUSOL PL ALU** intumescent seals by protecting it against humidity and from carbon dioxide, thus preventing weathering.

The presence of a vinyl film in no way affects the intumescent reaction of the **PALUSOL**.

Other features: refer to the technical data sheets for **PALUSOL 100 & 104**.

Physical properties of PALUSOL PL & PL ALU

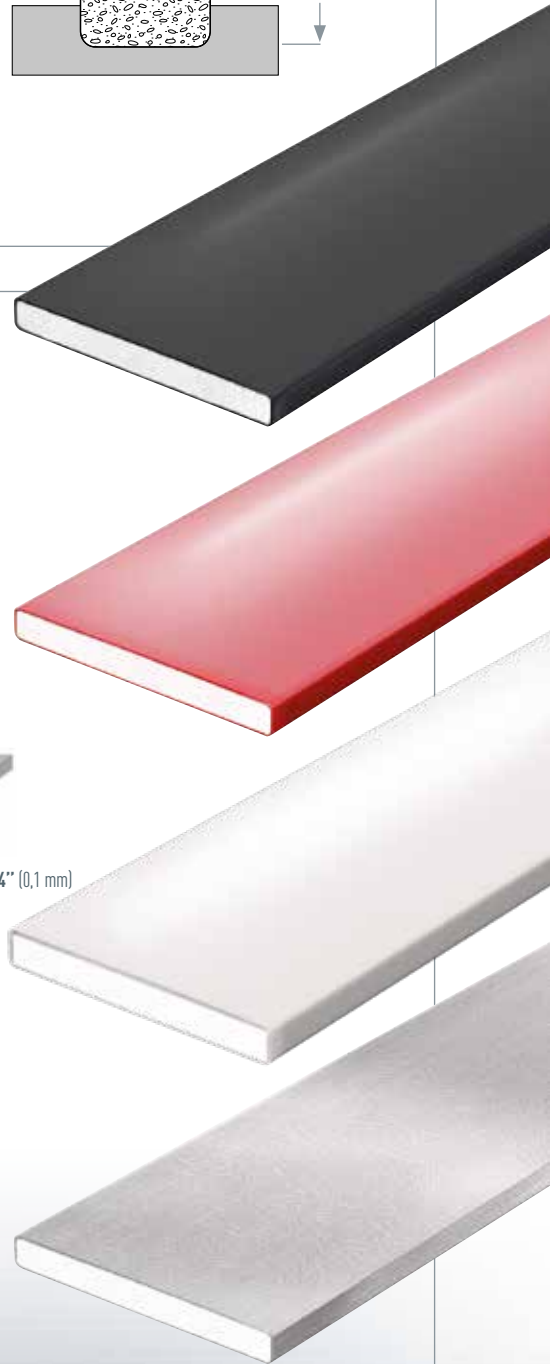


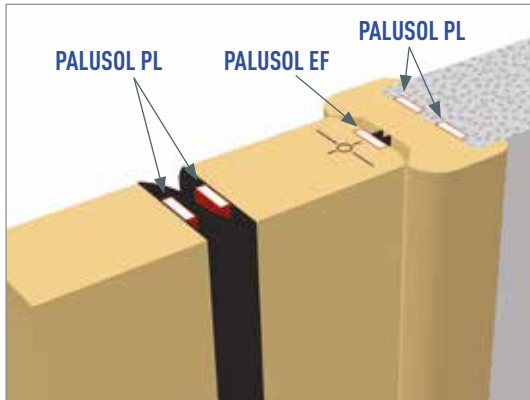
Values given for information only (*). Refer to the paragraph on tolerances.

Foaming height 10 minutes at 1022°F (550°C) under load	> 5 x initial thickness
Expansion pressure	≥131 PSI (≥ 0,9 N/mm ²)
Thermal conductivity at 68°F (20°C)	0,8 W/m.K
Water content	25% to 40% of weight
Areal weight PALUSOL 100 (average)	0,61lb/ft ² (3,0 kg/m ²)
Areal weight PALUSOL 104 (average)	1,17lb/ft ² (5,7 kg/m ²)

Chemical composition

PALUSOL is a material made from hydrated sodium silicate, coated on both sides with an epoxy resin. The centre layer is reinforced with glass fibre. **PALUSOL** is asbestos-free.





Example of an application: fire retardant door

Applications

PALUSOL PL and **PALUSOL PL ALU** are intended for use where the requirement for mechanical resistance is reduced:

- Peripheral seals for fire resistant systems (doors, shutters, dampers, cabinets, doors, etc.)
- With an anti-finger trapping system
- Circular fire dampers
- Enhancement of the fire resistance of various elements etc.

Where mechanical resistance is required, the use of **PALUSOL P** or **PALUSOL PM** encapsulated in a rigid thermoplastic sheath is recommended.

Sections

PALUSOL PL			
Width and thickness			
3/8" x 1/16"	(10 x 2 mm)	3/8" x 3/16"	(10 x 4 mm)
5/8" x 1/16"	(15 x 2 mm)	5/8" x 3/16"	(15 x 4 mm)
3/4" x 1/16"	(20 x 2 mm)	3/4" x 3/16"	(20 x 4 mm)
1" x 1/16"	(25 x 2 mm)	1" x 3/16"	(25 x 4 mm)
1-3/16" x 1/16"	(30 x 2 mm)	1-3/16" x 3/16"	(30 x 4 mm)
1-3/8" x 1/16"	(35 x 2 mm)	1-9/8" x 3/16"	(35 x 4 mm)
1-9/16" x 1/16"	(40 x 2 mm)	1-9/16" x 3/16"	(40 x 4 mm)
1-3/4" x 1/16"	(45 x 2 mm)	1-3/4" x 3/16"	(45 x 4 mm)
2" x 1/16"	(50 x 2 mm)	2" x 3/16"	(50 x 4 mm)

Other sections can also be fabricated.

For **PALUSOL PL ALU** sections please contact us.

Product range

Colours PALUSOL PL:

White, black, red and alu.

For other colours please contact us.



Adhesive version (ref. SA):

PALUSOL PL and **PALUSOL PL ALU** can be surfaced with a double-sided adhesive strip to facilitate installation.

Standard length: 82" (2100 mm).

Any other length can be fabricated up to a maximum of 82" (2100 mm).

Tolerances:

- Thickness(*): $\pm 0,016''$ ($\pm 0,4$ mm)
- Width: $\pm 0,02''$ ($\pm 0,5$ mm)
- Length: Raw parts: $0/+ 0,59''$ ($0/+15$ mm)
Cut parts: $0/- 0,04''$ ($0/-1$ mm)

(*) On products without self-adhesive strip.



Long-term efficiency of PALUSOL

The long-term efficiency of **PALUSOL** has been proven in normal climatic conditions.

The results of tests conducted by BASF SE and by independent institutions (such as the Institut für Holzforschung in Munich) show that after 40 years of prolonged exposure in normal conditions of use, **PALUSOL** retained its efficiency in the event of fire (the expansion height and expansion pressure parameters remained constant).

Recommendations for use

- Do not use at temperatures in excess of 104°F (40°C).
- For applications in sustained high humidity levels (> 90%), or when in regular contact with water or steam (marine, rail applications), we recommend the use of **PALUSOL P ET** or **PALUSOL PM ET** - the watertight version (ref. **ET**). (cf. technical data sheet for **PALUSOL P** and **PM**).

Installation

Since the intumescent action of the **PALUSOL PL** and **PALUSOL PL ALU** seals creates an expansion pressure, for sealing a fire resistant door it is essential that it is fitted to the edge of the frame or door leaf.

In order to achieve an aesthetically acceptable installation as well as mechanical protection, the **PALUSOL PL** and **PALUSOL PL ALU** intumescent seals should be fitted into a groove which is wider than the section. This groove will also serve to channel the expansion of the intumescent material.

The surface must be free from dust, grease and any kind of wax. Remove poorly adhering paint.

The seal can be fixed by gluing, but we recommend fixing by a double-sided adhesive strip which is easy to use. This method of fixing requires the seal to be mounted to allow the adhesive strip to be applied correctly onto the receiving surface.

Packaging

PALUSOL PL and **PALUSOL PL ALU** are delivered in flat, semi-rigid profiles, packed into wooden boxes.

Storage

Store in a dry well-ventilated area at room temperature (20° C ± 5° C or 68° F ± 41° F), normal humidity (50 -70%) and with absence of UV-radiation.

Shelf-life

Seals with self-adhesive (SA version): maximum 12 months after delivery date if stored in original packing under proper conditions as described above.

Health and safety measures

Observe usual workplace health and safety rules
Refer to the safety data sheet for **PALUSOL 100 & 104**.

PALUSOL® is a registered trademark of BASF SE.

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