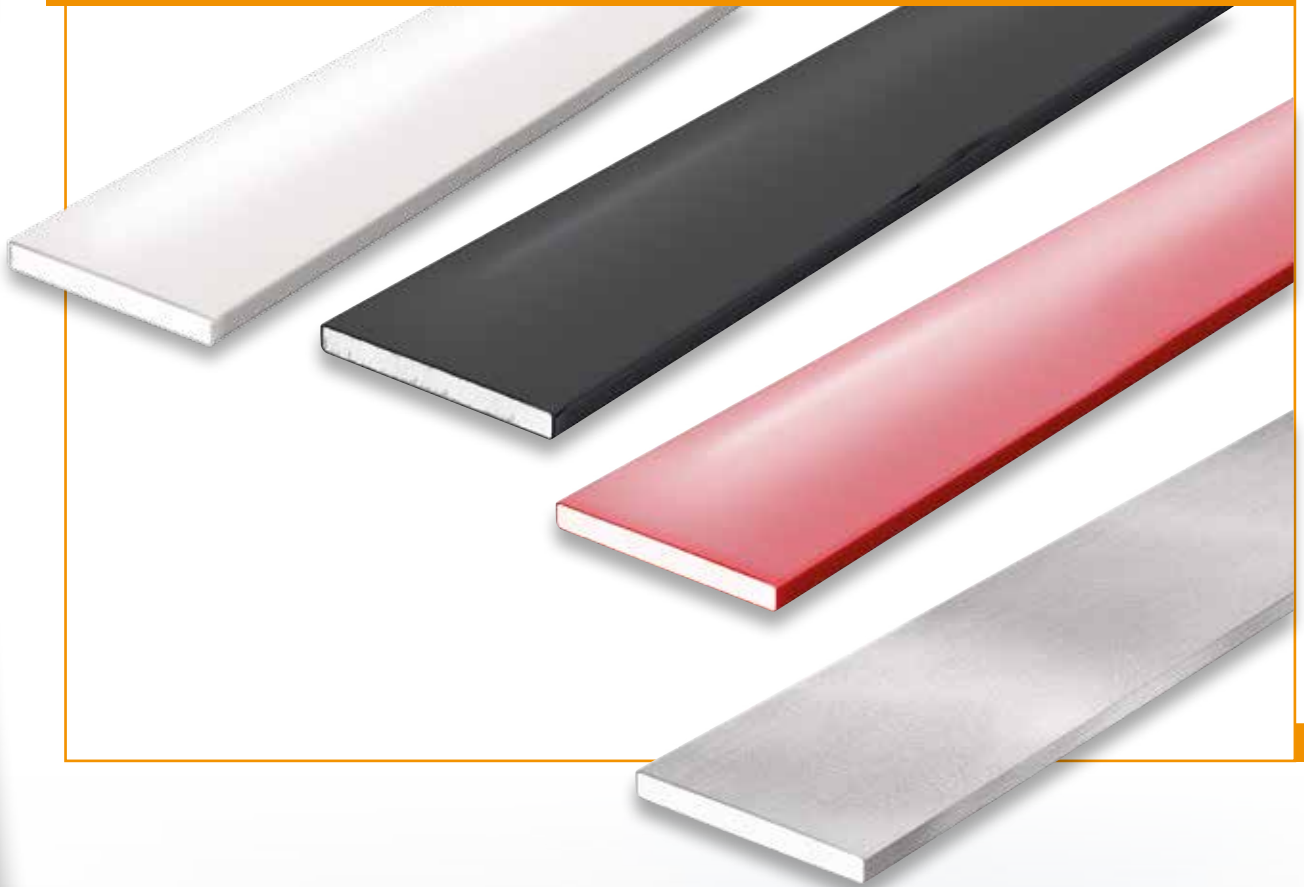


Intumescent fire seals

GB / 1.2 / Rev. 4

PALUSOL® PL & PL ALU



odice
PASSIVE FIRE PROTECTION

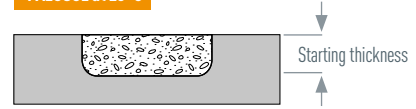


Product description

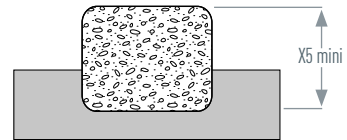
PALUSOL PL is an intumescent fire seal made from **PALUSOL**, a hydrated sodium silicate material, encapsulated in a vinyl foil or an aluminium foil for the **PALUSOL PL ALU** version. When exposed to fire, **PALUSOL PL** and **PALUSOL PL ALU** are activated at a temperature of between 100 and 120°C, 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 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.

PALUSOL at 20°C



PALUSOL at 150°C



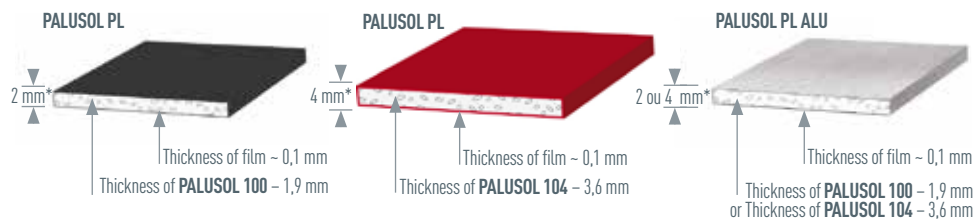
Features

In interior applications, the vinyl film and aluminium film 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 or an aluminium film in no way affects the intumescent reaction of the **PALUSOL**.

Other features: refer to the technical data sheets for **PALUSOL 100, 104 & 210**.

Physical properties of PALUSOL PL & PL ALU

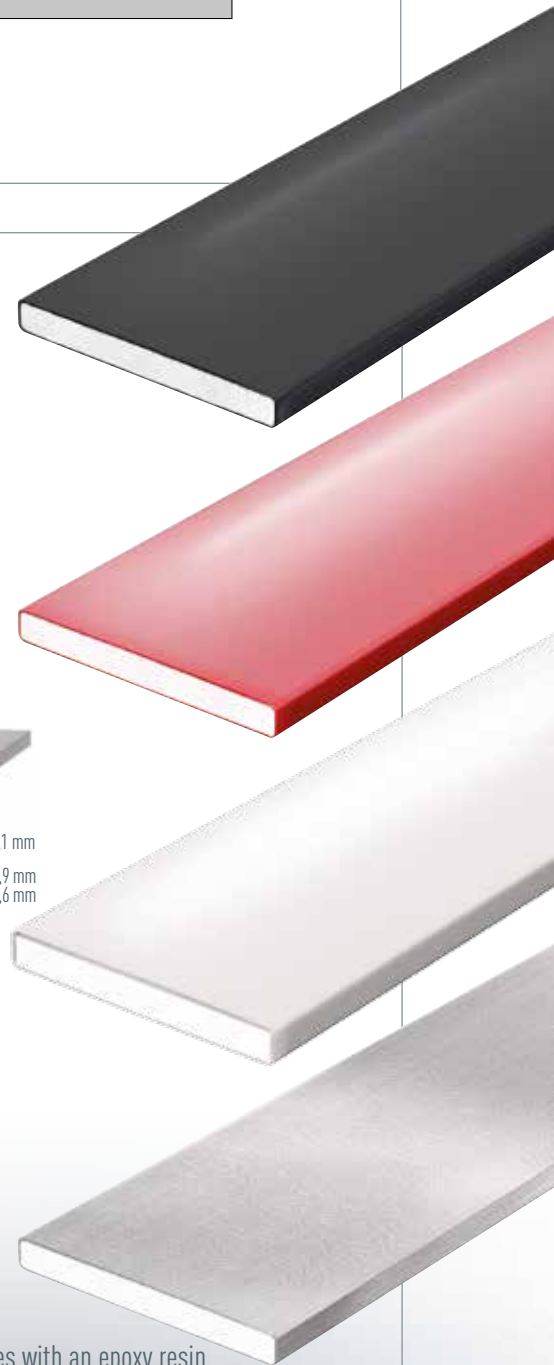


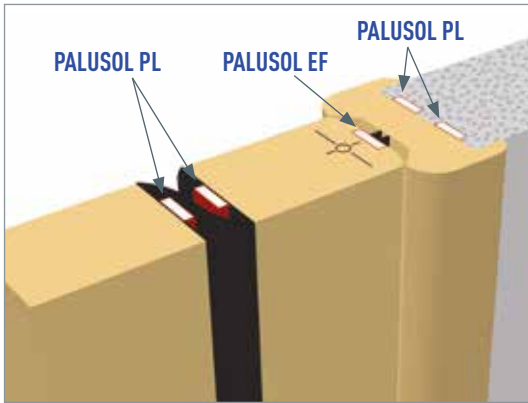
Values given for information only (*). Refer to the paragraph on tolerances.

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

Product range

Sections

PALUSOL PL <i>Width and thickness</i>	
10 x 2 mm	10 x 4 mm
15 x 2 mm	15 x 4 mm
20 x 2 mm	20 x 4 mm
25 x 2 mm	25 x 4 mm
30 x 2 mm	30 x 4 mm
35 x 2 mm	35 x 4 mm
40 x 2 mm	38 x 4 mm
45 x 2 mm	40 x 4 mm
50 x 2 mm	45 x 4 mm
55 x 2 mm	50 x 4 mm
60 x 2 mm	55 x 4 mm
70 x 2 mm	70 x 4 mm

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

Colours PALUSOL PL:

White, black, red, and grey.

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: 2100 mm.

Any other length can be fabricated up to a maximum of 2100 mm.

Tolerances:

- Thickness(*): $\pm 0,4$ mm
- Width: $\pm 0,5$ mm
- Length: Raw parts: 0/+ 15 mm
Cut parts: 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 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 **WATERTIGHT PALUSOL P or PM** (cf. technical data sheet for **PALUSOL P and PM**).

Installation

Since the intumescent action of the **PALUSOL PL** and **PALUSOL PL ALU** seals seal 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 carefully in a dry, well-ventilated location. Prolonged storage in the container, may cause deformation of the **PALUSOL PL** and **PALUSOL PL ALU** seals. Every time a part is removed, reposition the rows tightly.

Health and safety measures

Observe usual workplace health and safety rules

Refer to the safety data sheet for **PALUSOL 100, 104 & 210**.

PALUSOL® is a registered trademark of BASF SE.

IMPORTANT: while the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by ODICE hereunder are given free of charge and ODICE assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.



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