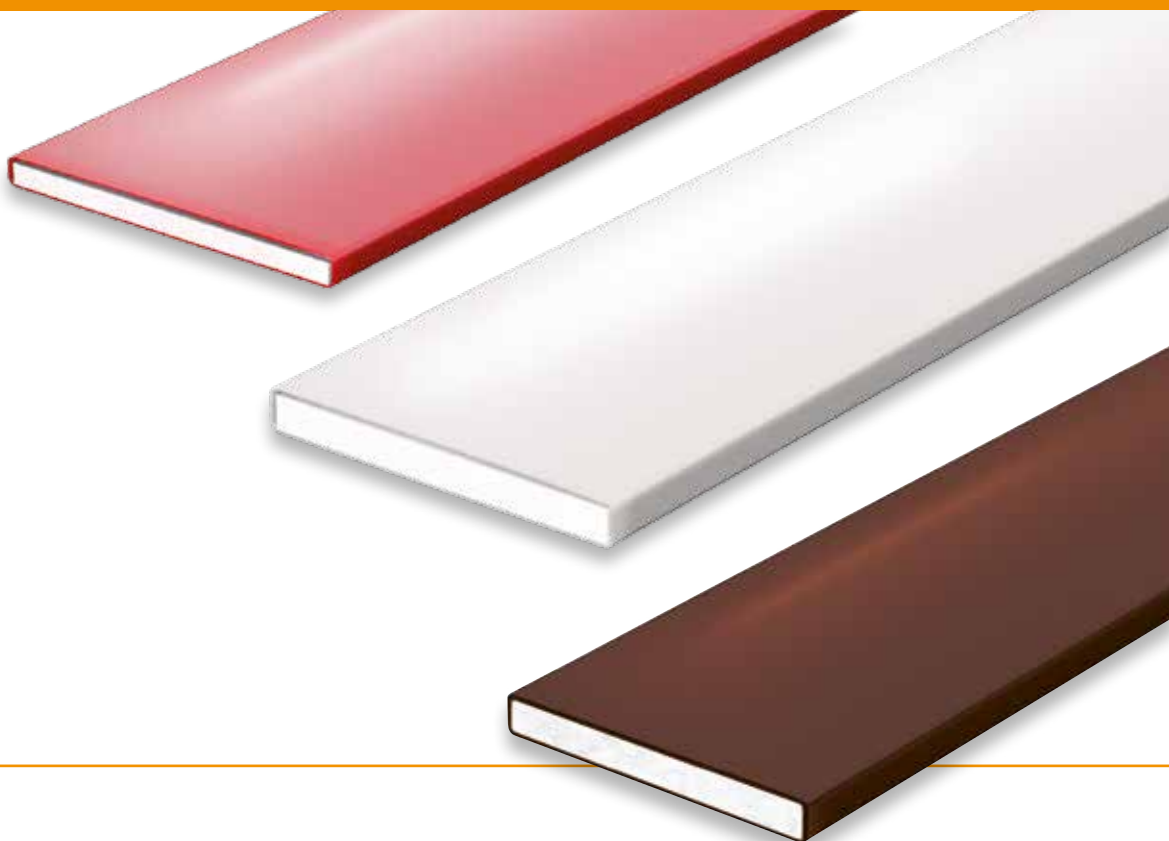


## Intumescent fire seals

GB / 1.1 / Rev. 4

# PALUSOL<sup>®</sup> P, PM



odice  
PASSIVE FIRE PROTECTION

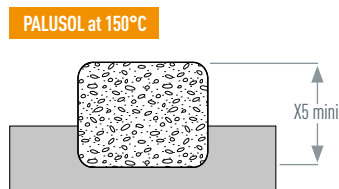
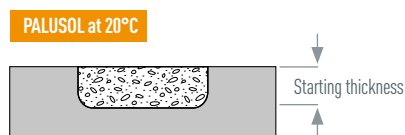


## Product description

**PALUSOL P** und **PALUSOL PM** are intumescent fire seals made from **PALUSOL**, a hydrated sodium silicate material, encapsulated in a rigid thermoplastic profile.

When exposed to fire, the **PALUSOL** is activated at a temperature of between 100 and 120°C, the profile 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/mm<sup>2</sup>. 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.



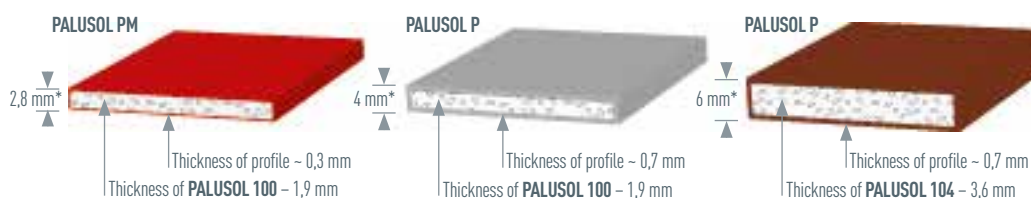
## Features

In interior applications, the thermoplastic profile extends the service life of the **PALUSOL P & PM** intumescent seal by protecting it against humidity and from carbon dioxide, thus preventing weathering.

The presence of a profile 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 P & PM

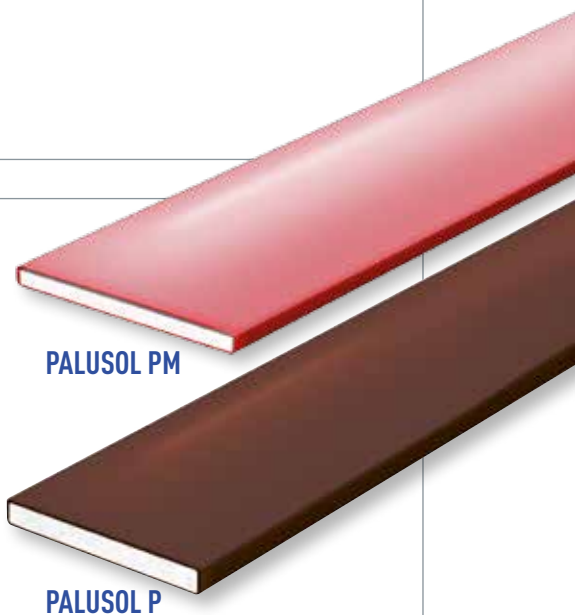


Values given for information only (\*) Refer to the paragraph on tolerances

Foaming height (10 minutes at 550°C under load)	> 5 x initial thickness
Expansion pressure	≥ 0,9 N/mm <sup>2</sup>
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 <sup>2</sup>
Areal weight PALUSOL 104 (average)	5,7 kg / m <sup>2</sup>

### Chemical composition

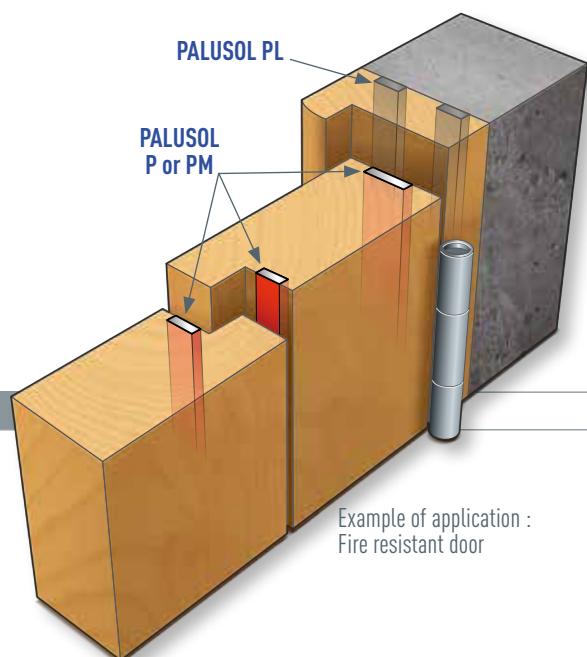
**PALUSOL** is a material made from hydrated sodium silicate, coated on both sides with an epoxy resin. The centre layer is reinforced with glass fibre. **PALUSOL** is asbestos-free.



## Applications

**PALUSOL P and PM** are intended for use where mechanical resistance is required:

- Peripheral seals for fire resistant systems (doors, shutters, dampers, cabinets, walls, cable penetration systems etc.).
- Enhancement of the fire resistance of various elements etc.



## Product range

### Profile colour

White, black, red, grey and brown. Other colours are also possible (please contact us).

For **PALUSOL P**, a "wood imitation" finish is available. Then the product is called **PALUSOL W**.



## Sections

<b>PALUSOL PM</b> <i>Width and thickness</i>	<b>PALUSOL P</b> <i>Width and thickness</i>	<b>PALUSOL P</b> <i>Width and thickness</i>
10 x 2,8 mm	10 x 4 mm	10 x 6 mm
12 x 2,8 mm	15 x 4 mm	15 x 6 mm
15 x 2,8 mm	20 x 4 mm	20 x 6 mm
16 x 2,8 mm	25 x 4 mm	25 x 6 mm
18 x 2,8 mm	30 x 4 mm	30 x 6 mm
20 x 2,8 mm	35 x 4 mm	35 x 6 mm
25 x 2,8 mm	38 x 4 mm	40 x 6 mm
28 x 2,8 mm	40 x 4 mm	45 x 6 mm
30 x 2,8 mm	45 x 4 mm	50 x 6 mm
35 x 2,8 mm	50 x 4 mm	60 x 6 mm
40 x 2,8 mm	55 x 4 mm	
	60 x 4 mm	
	70 x 4 mm	

Other sections can also be manufactured

### Adhesive version (ref. SA):

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

**Standard lengths:** 1020, 2040, 2100 mm

Any other lengths can be fabricated up to a maximum of 3000 mm.

### Tolerances:

- Thickness (\*): **PALUSOL PM** : 0/+0,4 mm  
**PALUSOL P** : ± 0,2 mm
- Width: ± 0,25 mm
- Length: 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 above 40°C.
- For applications involving 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** (a watertight bead is applied to both ends of the seal, thus preventing any penetration of water). Where the customer cuts the seal himself, simply applying a bead of silicone sealant will create an effective barrier.

## Installation

Since the intumescent action of **PALUSOL P and PM** seals create an expansion pressure, for sealing a fire retardant door it is essential that they are fitted to the edge of the frame or door leaf.

In order to achieve an aesthetically acceptable installation as well as mechanical protection, **PALUSOL P and PM** 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 receiving surface must be free from dust, grease and any kind of wax. Remove poorly adhering paint.

The seals can be fixed by gluing, but we recommend fixing by 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 correctly applied to the surface.

### Packaging

**PALUSOL P and PM** are delivered in flat, rigid profiles, packed into cardboard boxes.

### Storage

Store carefully in a dry, well-ventilated location.

### 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.



**ODICE S.A.S** - Passive Fire Protection

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