AODISI

FIRE TECHNOLOGY

# 产品资料与销售咨询

PRODUCT DOCUMENTATION & SALES CONTACT

## PALUSOL PL & PL ALU - Technical Data Sheet-en


澳迪斯防火科技（廊坊）有限公司

Aodisi Fire Technology (Langfang) Co., Ltd.

销售及选型联系 / Sales & product enquiries

**19931333348**

492048031@qq.com

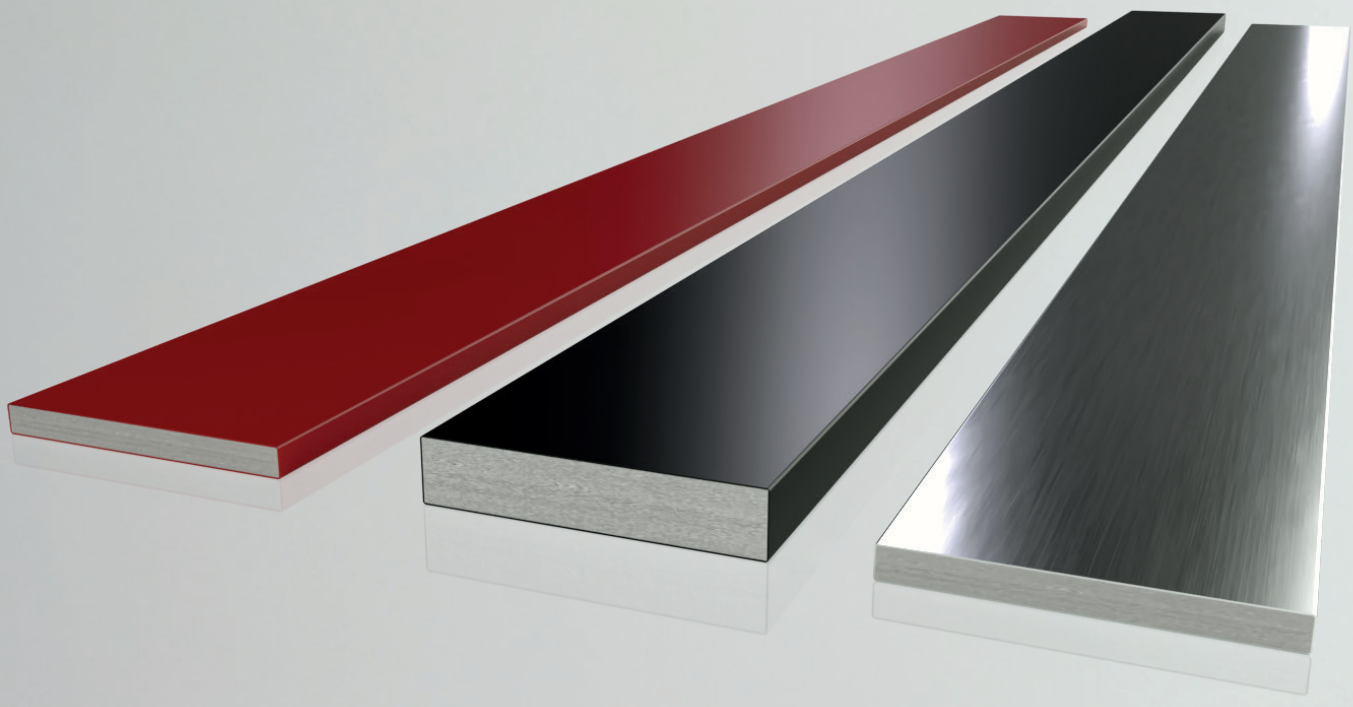
www.gmfireproof.com


以上为销售联系信息，不替代安全数据表中的应急联系电话。
原始技术内容及制造商、检测机构和证书签发信息见后续资料页。

Sales contact only; emergency contacts in safety data sheets remain applicable.
Original technical, manufacturer and certification details follow.

Technical Product Data Sheet

# PALUSOL® PL & PL ALU



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Tech. Rev.: 1.0
Ling. Rev.: 1.0

## Product description

PALUSOL® PL and PALUSOL® PL ALU are intumescent fire protection seals made from hydrated sodium silicate surrounded by a vinyl film or aluminium foil. The seal is activated at temperatures between 100 and 120 °C, at which point the material expands to least five times its original thickness. The non-combustible foam produced provides an effective thermal barrier that prevents the passage of flames, smoke and hot gases. The vinyl film or aluminium foil protects the seal against moisture and carbon dioxide and makes it particularly durable for indoor use.

## Reaction to fire

- Class A2-s1,d0 (DIN EN 13501-1)

## Properties

- Intumescent sodium silicate, enclosed in a vinyl film or aluminium foil
- Activates at temperatures between 100 °C and 120 °C
- Expands to five times its original thickness
- Forms a rigid, non-combustible foam with a high degree of thermal insulation
- Expansion pressure of up to 1.5 N/mm²
- Resistant to moisture and the effects of weather

## Fields of application

- Seals for fire-resistant systems
- Fire protection doors and windows
- Sealing of joints in fire-resistant building elements
- Greater fire resistance for structural elements
- Fire-resistant partition walls and floors
- Mechanically stressed fire-resistant seals

## Features

Expands at 100 to 120 °C, increasing in volume to at least five times its original thickness.

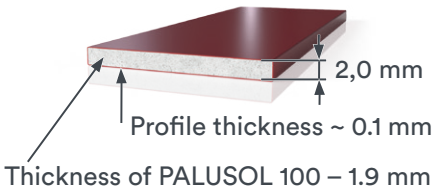
## Technical data

| | |
|---|---|
| **Verification** | ETA-15/0345: 10 March 2021 |
| **Composition** | Hydrated sodium silicate, glass fibre reinforcement, enclosed in a vinyl film or aluminium foil |
| **Material structure** | Intumescent core material with outer layer made from vinyl or aluminium |
| **Thermal conductivity [W/(m·K)]** | 0.8 (at 20 °C) |
| **Pressure resistance [N/mm²]** | 0.9 |
| **Moisture content (mass percentage) [%]** | 25 to 40% of the weight |
| **Area density [g/m²]** | PALUSOL® 100: 3000<br>PALUSOL® 104: 5700 |
| **Start of reaction [°C]** | 100 |
| **Expansion rate [x times]** | At least 5 times its original thickness |
| **Intumescent layer** | Rigid, non-combustible foam |
| **Expansion pressure [N/mm²]** | > 0.9 |
| **Direction of expansion** | Perpendicular to the surface |
| **Surface finish** | Smooth, with vinyl film or aluminium foil |
| **Storage** | In a dry, well ventilated area at 20 °C and with 50–70% humidity |
| **Shelf life** | Up to 40 years under normal conditions |

## Design variants

With and without aluminium foil (PL and PL ALU), self-adhesive versions available

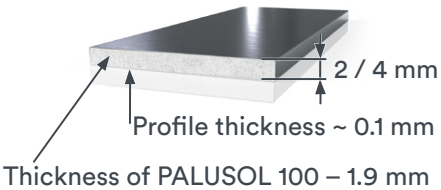
PALUSOL® PL




PALUSOL® PL




PALUSOL® PL ALU




## Colour variants

Black, white, red, metallic

## Processing information

1. Surface preparation:
   - The surfaces must be clean, dry and free from dust, grease and wax to ensure optimum adhesion. Remove poorly adhering paint before attaching the seal.
2. Installation and fixing:
   - To utilise the expansion properties of the material in the event of fire, PALUSOL® PL and PL ALU should be fitted in a groove. The groove should be wider than the profile of the seal to control the expansion of the material.
   - The seal can be attached using double-sided adhesive tape, which makes installation easier and ensures the seal is positioned correctly.
3. Safety notes:
   - Follow the applicable health and safety provisions for the workplace.

## Contents of a package/set

Profiles in wooden boxes

## Delivery forms

Standard lengths [mm] 2100

Adhesive version (SA): PALUSOL® PL and PALUSOL® PL ALU can be supplied with double-sided adhesive tape for easier installation.

| PALUSOL® PL (width × thickness) | | | |
|---|---|---|---|
| 10 × 2 mm | 10 × 4 mm | 40 × 2 mm | 38 × 4 mm |
| 15 × 2 mm | 15 × 4 mm | 45 × 2 mm | 40 × 4 mm |
| 20 × 2 mm | 20 × 4 mm | 50 × 2 mm | 45 × 4 mm |
| 25 × 2 mm | 25 × 4 mm | 55 × 2 mm | 50 × 4 mm |
| 30 × 2 mm | 30 × 4 mm | 60 × 2 mm | 55 × 4 mm |
| 35 × 2 mm | 35 × 4 mm | 70 × 2 mm | 70 × 4 mm |

## Tolerances [mm]

Thickness: ±0.2 (for products without self-adhesive tape)

Width: ±0.5

Length: Raw parts: 0/+15

Cuts: 0/-1

## Note

In applications that are continuously exposed to high humidity (> 90%) or that come into contact with water or steam (shipbuilding applications, rail vehicles), we recommend using PALUSOL P ET or PM ET (waterproof version) (see the technical data sheet for PALUSOL P and PM).