AODISI

FIRE TECHNOLOGY

产品资料与销售咨询

PRODUCT DOCUMENTATION & SALES CONTACT

PALUSOL ® 100 & 104 - 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

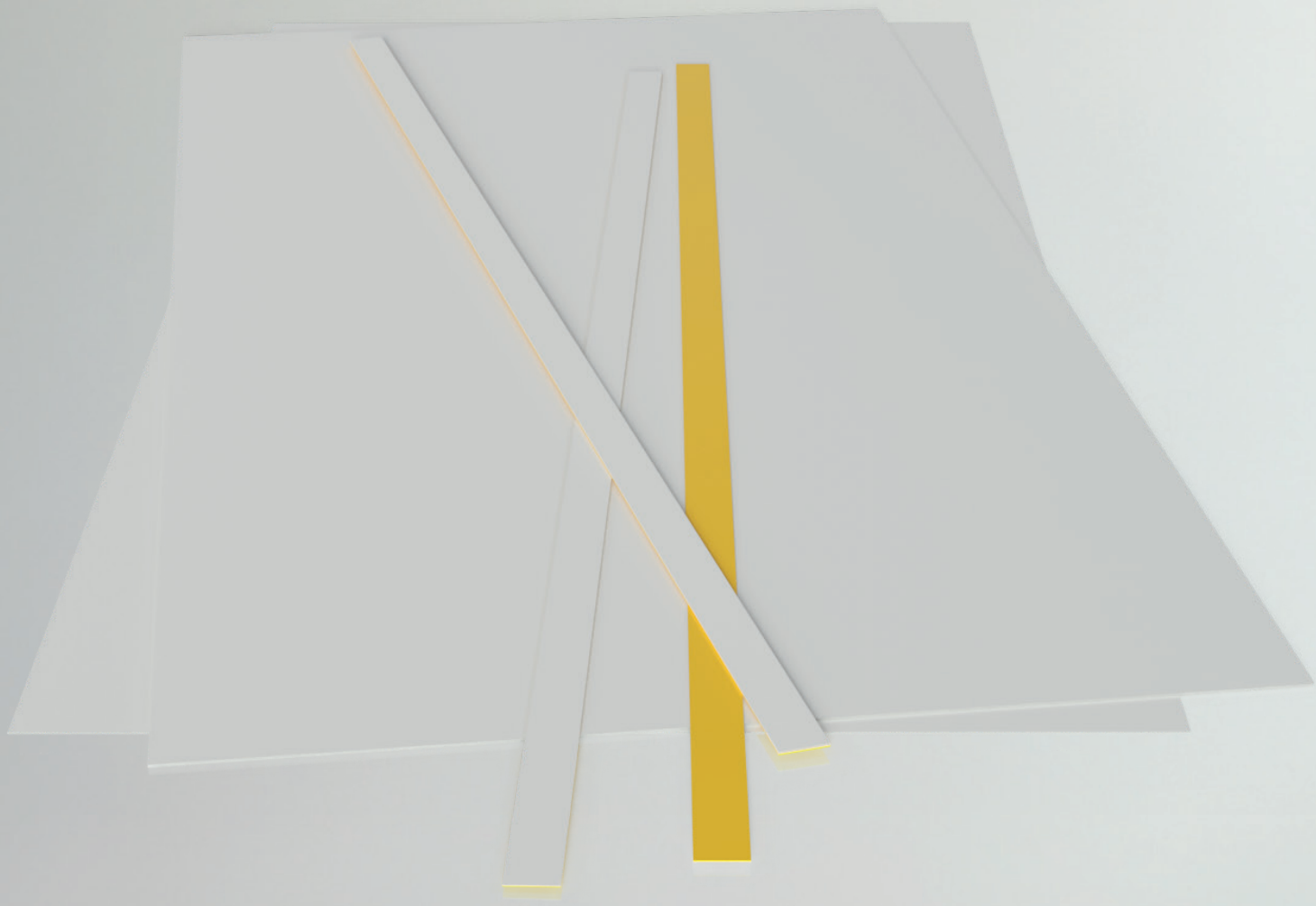
www.gmfireproof.com

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® 100 and 104



kuhn odice

Tech. Rev.: 1.1
Ling. Rev.: 1.1

Product description

PALUSOL® 100 and PALUSOL® 104 are sodium silicate-based intumescent boards reinforced with glass fibre and coated on both sides with epoxy resin. They offer reliable protection against fire by expanding at temperatures of 100 °C or higher to form a heat-resistant, thermally insulating foam layer. The foam seals gaps and joints, preventing the passage of smoke, heat and flames. PALUSOL® 100 comes in thicknesses from 1,9 mm ± 0,4 mm, while PALUSOL® 104 is thicker (ranging from 3,6 mm ± 0,6 mm), which allows for different areas of application. The boards are asbestos-free. They are ideal for fire-resistant doors, ventilation flaps and other fire protection applications in buildings.

Reaction to fire

- Class A2 (DIN EN 13501-1)

Properties

- Intumescent fire protection board based on sodium silicate
- Epoxy resin coating protects against moisture and carbon dioxide
- Expands at temperatures of 100 °C or higher, with up to 1.60 N/mm² of expansion pressure
- Released crystal water cools the environment
- Forms a pressure-resistant, porous ceramic body in the event of fire
- Easy to cut and work

Fields of application

- Fire-resistant doors made from wood and metal
- Fire-resistant vaults and safes
- Intumescent ventilation grilles
- Fire-resistant ventilation flaps
- Fire-resistant glazing profiles and elements
- Fire-resistant elements for the rail and maritime industry
- Heat insulation for boards, etc.

Technical data

Verification	ETA-15/0345: 10 March 2021
Material structure	Sodium silicate core with glass fiber reinforcement, both sides / epoxy resin coating
Thermal conductivity [W/(m·K)]	0.8 (at 20 °C)
Moisture content (mass percentage) [%]	25 to 40
Area density [g/m²]	PALUSOL® 100: 2250 – 3750 PALUSOL® 104: 4300 – 7300
Start of reaction [°C]	100
Expansion rate [x times]	5,0 – 9,5
Intumescent layer	Finely porous, pressure-resistant and non-combustible foam layer
Expansion pressure [N/mm²]	0,95 – 1,60
Direction of expansion	Primarily perpendicular to the surface
Surface finish	Coated on both sides with epoxy resin
Storage	Protect against water, moisture and temperatures continuously above 40 °C. Always store the boards horizontally on a flat surface. Avoid stacking more than five pallets.
Shelf life	40 years

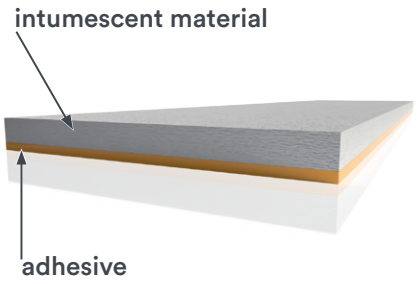
The long-term level of efficiency of PALUSOL® has been verified under normal climatic conditions.
The results of the tests performed by BASF SE and independent institutes (such as the “Institut für Holzforschung” in Munich, Germany (EN: Wood Research Munich)) show that, after 40 years of sustained exposure under normal usage conditions, PALUSOL® maintains its level of efficiency in the event of fire (the parameters for the expansion rate and expansion pressure remain constant).

Design variants

The PALUSOL® elements can be cut or punched as per your drawings at our facilities.

PALUSOL® can be provided with an adhesive strip for easier installation.

Colour variants: white



Measures for protecting PALUSOL®

To ensure the long-term stability of PALUSOL®, the material must be protected against environmental conditions that can alter its chemical structure. In particular, that includes water, high humidity, carbon dioxide in the air and temperatures continuously above 40 °C.

Recommended protective measures:

- Enclosing in a rigid thermoplastic profile (e.g. PALUSOL P, PM or EF) or in a vinyl film (PALUSOL PL).
- Sealing with a water-impermeable protective layer at the ends, depending on the application conditions.
- Compliance with the carbon dioxide permeability limits defined in ETA-15/0345:
  - Under 300 cm^3 (m^2 × bar × day) for profiles or covers applied with adhesive.
  - Under 100 cm^3 (m^2 × bar × day) for looser covers (e.g. vinyl film or profiles).
- Avoid mechanical damage because the boards may break.

Processing information

1. Surface preparation
   - Prior to further processing, ensure that the boards are free from dust, grease and other dirt.
   - An epoxy resin coating on both sides protects the core against environmental conditions (such as humidity or carbon dioxide).
2. Processing and cutting
   - PALUSOL® boards are flexible at room temperatures between 20 °C and 40 °C and easy to work (cutting and punching).

Note:

Use standard cutting tools and ensure that the edges are cleanly and precisely cut. It is necessary to wear personal protective equipment such as chemically resistant gloves, safety goggles and a dust mask. We furthermore recommend exhaust equipment as used for example in wood processing. After application, clean your skin thoroughly and treat it with skin care products.

3. Installation
   - If necessary, the boards can be provided with an adhesive strip for easier installation.

Contents of a package/set

PALUSOL® 100: 100 boards per pallet

PALUSOL® 104: 50 boards per pallet

Delivery forms

Dimensions (L × W) [mm]	1100 × 2100
Standard thicknesses [mm]	PALUSOL® 100: 1.5 to 2.3 PALUSOL® 104: 3.0 to 4.2

Tolerances [mm]

Cutting tolerances: ±0.5 mm

Note

PALUSOL® is cold-resistant. At low temperatures, it becomes brittle and easy to break but it regains its original flexibility once warmed up.

When subjected to a load, the boards have a tendency to deform (even under their own weight) and more or less adapt to the shape of the support below them.