



MICROPOROUS PANELS, BOARDS, PIPE INSULATION AND SPECIAL PRODUCTS

Microporous boards up to 1200 °C

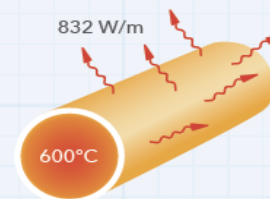
This product is a microporous thermal insulation material with very low thermal conductivity figures, and has due to that a very high insulation capacity.

The insulation figures are **0,020 W/mK** at 200 °C and **0,034 W/mK** at 800 °C - which is 4 to 5 times better than fiber materials. This insulation material consists just of inorganic, oxide substances.

The material is open to diffusion against humidity (water vapor). The sheets are available with different coatings/laminations.

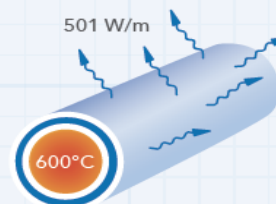
Applications can be found in all metal melting plants, power plants, refineries, fuel cells and various industrial furnaces.

Application examples:



Pipe insulation with 100 mm mineral wool

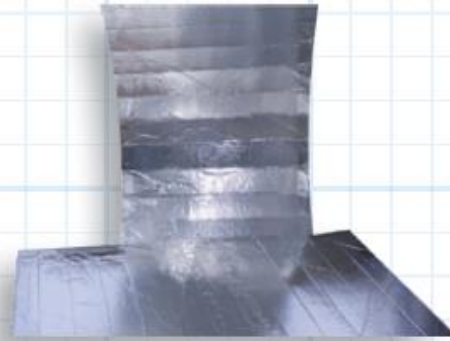
Pipe diameter: 400 mm
Temperature inside: 600 °C
Temperature outside: 76 °C
Heat loss m/pipe: approx. **832 W/mK**



Pipe insulation with 85mm mineral wool and with 15mm MB1000 Pipe

Pipe diameter: 400 mm
Temperature inside: 600 °C
Temperature outside: 46 °C
Heat loss m/pipe: approx. **501 W/mK**

Microporous pipe insulation
MB1000 PIPE



MB1000 Pipe is characterized not only by its excellent insulation values, but also by its ease of processing. The MB1000 Pipe panels can simply be placed around the pipe and fixed in place, with minimal effort.

MBH 1000



MBH1000 is a hydrophobic microporous board. It can be used in direct contact with water/condensate. It is resistant up to 1000 °C and also insulates very well with 0.034 W/mK at 800 °C.

Microporous halfpipes
made of MB1000

MB1000 half shells are with a glass fabric, glass fleece or aluminium foil and for the perfect sealing with a tongue and groove.

Diameter: from 10 to 300 mm possible

Length: up to 1000 mm

Insulation thickness:
5 to 100 mm* (*Single layer)



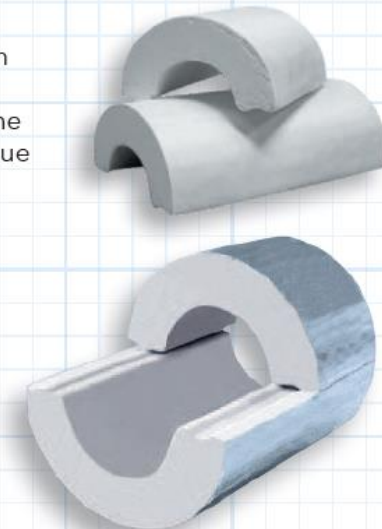
Microporous halfpipes
made of MB1000

MB1000 half shells are with a glass fabric, glass fleece or aluminium foil and for the perfect sealing with a tongue and groove.

Diameter: from 10 to 300 mm possible

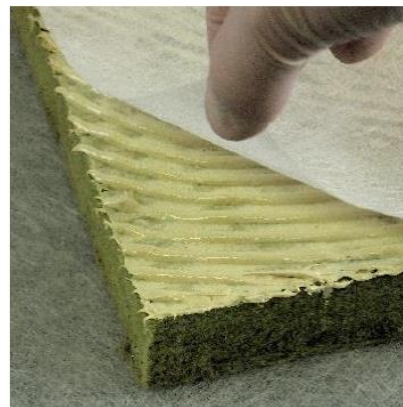
Length: up to 1000 mm

Insulation thickness:
5 to 100 mm* (*Single layer)



1250°C HIGH TEMPERATURE AND FIRE PROTECTION ELASTIC HYBRID ADHESIVE

Vatral® 200
Fire Protection Adhesive



MARITIME APPROVED CERTIFICATE // FIRE CLAS A1 DIN EN 13501-1:2019-05

Product Description

Vatral® 200 Fire Protection Adhesive is a non combustible, inorganic, single component adhesive. Based on alkali silicate with excellent permanent adhesion, high strength and hydrophobic equipment. The adhesive is usable for temperatures up to 1250 °C also at repeated cooling's.

Drying Times

Vatral® 200 Fire Protection Adhesive hardens both pure physically by water removal and by reaction with air. The strength of the adhesive is achieved at room temperature after approx. 4 hours. The complete curing after approx. 24 hours. Restrictions in the contact with the surroundings air prolong the end hardness time (CO₂ curing).

Area of Application

Vatral® 200 Fire Protection Adhesive can be used for fireproof glueing of steel pins, anchor and mineral insulants. The adhesive can be used to the cladding by mineral insulants.

Delivery Form

- Foil tube: **100 ml**
- tubular bags: **600 ml**
- bucket: **5 kg and 15 kg**

Other container sizes on request.

Risk assessment according to the Requirements of Directive 2014/90 / EU, Annex II, Part I.3

All reasonably foreseeable risks are covered by the applicable standards.

| | | | |
|------------------------------------|--------------------------------|---|--|
| Density | approx. 1,60 g/cm ³ | | |
| Colour | light ivory | | |
| Behaviour in fire | A1 | According to DIN EN 13501-1:2019-05 | Classification Report: KB-Hoch-141113-5 |
| Determination of adhesive strength | 0,4 N/mm ² | Comparable to DIN EN 1015-12:2016-12 | |
| Fracture pattern | A | | |
| Viscosity | Viscous | | |
| pH-value | approx. 11 at 23 °C | | |

Technical Data Shipbuilding – Status: 06.12.2020

| | | |
|-------------------|---|---|
| Behaviour in fire | <p>approved according to MED as flame retardant adhesive</p> <p>non-combustible, according to "IMO- Resolution MSC.307(88)-(FTP-Code 2010), Annex 1, Part 1". - confirmed by test report no. 20651185-10, GS-BS-Hau/Wa (DMT GmbH & Co. KG, Dortmund)</p> | <p>Module B: EC-Type Examination Certificate Certificate No. 118499-00</p> <p>Module D: Certificate No. SEE 20049</p> |
|-------------------|---|---|



VİZYON İNOVATİF YALITIM ENERJİ VE MÜHENDİSLİK LTD. ŞTİ.

POSTANE MAHALLESİ YALIBOYU CAD. NO: 81/1

TUZLA / İSTANBUL / TÜRKİYE

PHONE : +90 216 446 00 04

MOB : +90 532 566 45 64 / A. Fikret KOSE

E-mail : f.kose@vizyonendustriyelyalitim.com