



Material Type: Refractory fibre felt.

Classification Temperature: 1320°C

Description

Cerafelt™ is an insulating refractory felt, obtained by hot pressing. It is made from Cerachem fibres, bonded with an organic binder which begins to burn out at 180°C.

This special binder makes Cerafelt particularly suitable for die-cutting operations. Semi-rigid, it is neither brittle nor dusty.

Cerafelt optimizes the manufacture of complex, die-cut shapes to close tolerances.

With a choice from eight densities and seven thicknesses, Cerafelt offers a grade to suit most requirements.

Made from chemically stable fibres, lightweight and very insulating, Cerafelt is a multi-purpose product.

Maximum Use Temperature

The maximum continuous use temperature depends on the application. Refer to our company for advice.

Features

- Wide range of densities: eight grades from 48kg/m³ up to 384kg/m³.
- High temperature resistance.
- Very low thermal conductivity.
- Particularly suited to cutting operations (with saw, water jet or by stamping).
- Flexible or semi-rigid, depending on density selected.
- Chemically stable.
- High sound absorption properties.
- Precise thicknesses.
- Resistant to thermal shock.
- Low heat storage.

Applications

- High temperature gaskets.
- Expansion joints for furnace, kiln and boiler linings.
- Die-cut shapes for domestic appliances.
- Thermal barrier media.

Main Properties

• Classification temperature °C 1320

Properties measured at ambient conditions (23°C/50% RH)

• Colour Yellow
• Density (depending on grade) kg/m³ 48 - 384

High temperature performance

• Loss on ignition (depending on grade) % 4 - 12
• Permanent linear shrinkage (NFB-40-456) after 24 hours isothermal heating at:
1260°C % 2.5
1320°C % 3

• Thermal conductivity (NFB-40-456) at a mean temperature of:

| | | Density (kg/m ³) | | | | | | | |
|--------|-------|------------------------------|------|------|------|------|------|------|------|
| | | 48 | 64 | 96 | 128 | 160 | 192 | 288 | 384 |
| 300°C | W/m.K | 0.11 | 0.10 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.06 |
| 500°C | W/m.K | 0.20 | 0.17 | 0.14 | 0.12 | 0.11 | 0.11 | 0.10 | 0.10 |
| 700°C | W/m.K | 0.33 | 0.27 | 0.21 | 0.18 | 0.16 | 0.15 | 0.13 | 0.13 |
| 900°C | W/m.K | 0.51 | 0.41 | 0.31 | 0.25 | 0.22 | 0.20 | 0.17 | 0.15 |
| 1100°C | W/m.K | 0.75 | 0.59 | 0.42 | 0.34 | 0.29 | 0.25 | 0.21 | 0.18 |

• Specific heat at 1000°C kJ/kg.K 1.13

Chemical composition

SiO₂ % 49.70
Al₂O₃ % 35.10
ZrO₂ % 14.70
Fe₂O₃ % 0.10
CaO+MgO % 0.05
Na₂O+K₂O % 0.20

Availability and Packaging

Standard size 1220 x 1070mm. Size 2450 x 1070mm, other densities and thicknesses upon request. Cerafelt is packed in cartons on pallets.

| Thick (mm) | Density (kg/m ³) | | | | | | | |
|------------|------------------------------|----|----|-----|-----|-----|-----|-----|
| | 48 | 64 | 96 | 128 | 160 | 192 | 288 | 384 |
| 3 | | | | X | X | X | X | X |
| 6 | | X | X | X | X | X | X | X |
| 10 | | X | X | X | X | X | X | X |
| 13 | X | X | X | X | X | X | X | |
| 19 | X | X | X | X | X | X | | |
| 25 | X | X | X | X | X | X | | |
| 38 | | | X | | | | | |

The values given herein are typical average values obtained in accordance with standard test methods and subject to normal manufacturing variations. They are supplied as technical data and may change without notice. Contact our company to obtain detailed information.

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