

Kaoclad™



Type

Moist impregnated mouldable sheets.

Classification Temperatures

1260 Grade: 1260°C

1400 Grade: 1400°C

The maximum continuous use temperature depends on the application. In case of doubt, refer to your local Morgan Thermal Ceramics distributor for advice.

Features

- Good wet strength facilitates shaping and installation
- After drying, provides lightweight but strong and abrasion resistant protection to soft substrate insulation
- Very resistant to thermal shock
- Low thermal conductivity - matches that of blanket
- Can be used to make simple rigid shapes
- Sheet size 915mm x 610mm fits standard Blanket stud pattern

APPLICATIONS

The main use of Kaoclad is as a protective hot face layer covering soft substrate fibre and other products, and where a contoured profile is required.

DESCRIPTION

Kaoclad™ is the improved version of Kaowool™ Moist Felt, made from the highest quality spun fibre blanket with an inorganic hardening agent. It has excellent handling characteristics, both wet and dry.

It is supplied, packed in sealed polythene bags, as moist sheets that can be moulded to follow a curved or angled profile. After drying, (preferably between 60°C and 90°C), it provides strong, rigid yet lightweight insulation with texture and properties similar to Kaowool Inorganic Vacuum Formed Board.

In the moist state, Kaoclad has a shelf life of up to 6 months, provided that the bags remain sealed and are maintained at temperatures within the range 10°C to 50°C. However, it is important to protect the material against frost.

OTHER APPLICATIONS

- **Furnace Buildings**
Hot face lining in furnaces, heaters and ductwork (when gas flow rate and particle erosion is too high for blanket), blast furnace tuyeres and element hanger anchor protection.
- **Ferrous and Non-Ferrous**
Lining ladles, launders and distribution boxes.
- **Power Generation**
Insulation of steam turbines and ancillary plant (in conjunction with blanket)
- **General**
Combustion chamber insulation repairs to refractory linings of steam-raising boilers, recuperator linings, pipe insulation and all areas where self-supporting thermal protection is required.

Kaoclad™

Main Properties

| Grade | 1260 | 1400 |
|---|----------------------|----------------------|
| Classification (°C) | 1260 | 1400 |
| Properties Measured at Ambient Conditions (23°C/50% RH) | | |
| Colour | White/buff | White/buff |
| Density (wet) (kg/m ³) Density (dry) (kg/m ³) | 700-800 275 | 700-800 275 |
| Modulus of rupture (MPa) | 0.45 | 0.45 |
| Tensile strength (wet) (MPa) | 0.12 | 0.14 |
| High Temperature Performance* | | |
| Permanent linear shrinkage after 24 hours (%) at: 1200°C 1300°C | <3 - | - <4 |
| Thermal conductivity (W/m.K) at mean temperature of: 500°C 750°C 1000°C | 0.10 0.14 0.20 | 0.10 0.14 0.20 |

Availability and Packaging

Kaoclad 1260 and 1400 grades are normally supplied in standard sheets of 915mm x 610mm, in the following thicknesses. They are rolled and sealed in plastic bags, then packed in cardboard cartons.

| Standard Thickness (mm) | Packaging Quantity Per carton |
|-------------------------|-------------------------------|
| 5 | 10 |
| 10 | 8 |
| 15 | 4 |
| 25 | 3 |

Note: Due to the product's inherently compressible nature, Kaoclad thicknesses once installed may be around 20% less than nominal.

In order to suit the previous Moist Felt stud pattern, Kaoclad can be supplied on request in sheets of 500mm x 1000mm and in the same range of thicknesses.

The values given herein are typical values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.