

INSULFRAX™ VARIFORM

Insulfrax™ Variform is made from Insulfrax™ Bulk calcium magnesium silicate fibers and inorganic hydraulic setting binders.

Variform™ is a casting material that is applied to areas such as furnace access-doors, tube sheets, and behind refractories in aluminium transfer ladles, ladle covers and launders.

General Characteristics

Insulfrax™ Variform has the following outstanding properties:

- Easy to apply
- Low thermal conductivity
- Low heat storage
- High thermal shock resistance
- Excellent corrosion resistance
- Good temperature stability

Chemical Properties

Insulfrax™ Variform castable exhibits excellent chemical stability resisting attack from most corrosive agents. Exceptions are hydrofluoric and phosphoric acids and concentrated alkalis. Variform castables also resist oxidation and reduction. If wet by water or steam, thermal and physical properties are completely restored upon drying.

Installation and Drying schedule

Small Variform batches of less than 45 kg are easily hand mixed. Larger batches are mixed using cement or paddle-type mixer. The correct amount of water is slowly added to the dry mix until the material is uniformly blended. Over-mixing will cause fiber breakdown and should be avoided. The castable is easily poured or trowelled into place with some

tamping being helpful to eliminate voids. The casting will set completely in 18 hours and may be force dried at temperatures to 200°C to remove free water.

Availability

- Insulfrax™ Variform is available in 20 kg bags (dry).

Installation and Drying Schedule

Density Required (kg/m ³)	Litres of Water per 20kg Bag
800	19.5
960	15.1
1280	8.6

Physical Properties

Colour	Tan (dry)
Continuous Use Limit	1100 °C
Dry Density	900 kg/m ³
Melting Point	1330 °C
Fiber Diameter	2-3 microns
Linear Shrinkage (24 hrs, 980°C)	1.6%

Thermal conductivity Data (W/mK)

420°C Mean Temp	0.16
650°C Mean Temp	0.21
870°C Mean Temp	0.25

Typical Applications

- Backup insulation.
- Ladle backup insulation.
- Induction furnace insulation.
- Furnace door insulation.
- Backup for launder installations.