Refrac™ Polypropylene

Refrac™ is a round, monofilament fiber made of polypropylene which possesses a number of fantastic properties. These fibers were developed for use in fireproof materials and for casting purposes at high temperatures.

This results in reduced wastage and improved application opportunities in the finished products.

Advantages and Properties

- Reinforces and improves fireproof materials
- Reduces the wastage rate in the end product
- Reduces the CO_2 discharge

General Applications

- Chinaware such as wash basins and toilets
- Firebricks for high and low temperature ovens
- Fire-retardant materials
- All forms of clay earthenware e.g. bricks and roof tiles
- Medicine industry.

Specifications - Refrac™	
Thickness:	**15-110 micron**
Length:	**4 or 6 mm**
Maximal load approx.:	**300 MPa**
Elongation:	**130-180%**
Softening temperature:	**140-150°C**
Melting temperature:	**165°C**
Dosing:	**0.9 – 2.0 kg/cu m**

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Application

Refrac™ fiber is used in the fireproof matrix to guarantee an optimal stress distribution and apart from this, it gives stronger cohesion of the matrix. Porosity is created in the actual burning process of the fireproof material as the fibers will melt way.

As the fibers rest in a 3-dimensional structure in the matrix, the advantage of having moist and steam escape from the material is achieved. Thus the risk of crack formation and fragmentation is reduced both during the burning and after the burning.

Thermical properties:

Refrac™ has very low thermal conductivity and a low melting temperature

- Softening temperature approx 140-150° C
- Melting temperature approx. 165° C

Absorption of moisture:

Absorption of moisture:
- at 20° C/65% R.H. 0.05%
Absorption of water: < 0.1%

Polypropylene has the lowest absorption of moisture of all fibers, and this guarantees dry fibers.

Chemical and biological resistance:

All Refrac™ fibers demonstrate substantial resistance to acids and alkalis and most organic chemicals. To this can be added that they do not rot, and they will not be attacked by insects or micro-organisms.

Electrostatic properties:

Refrac™ has a negligible tendency of developing static electricity.

Dimensions:

Refrac™ is available in thicknesses from 15 - 110 micron and in various lengths. The application of thin fibers means more fibers in the mixture, but this requires a special, highly effective mixing machine.

Delivery:

Refrac™ is delivered in cartons of 25-35 kg on pallets with 600-840 kg. (24-32 cartons).

Guarantee references

Refrac™ complies with EN-14.889-2, fiber class 1a, system 1 and is produced in a facility that is certified to the ISO 9001-2004 standard. MiniFIBERS does not have control over the installation of their products and their processing, and therefore cannot take responsibility for the final products.

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