

PRODUCT DATA SHEET

Description

The RAD12pp is a fine mono-filament polypropylene fibre that provides crack control while concrete is in its elastic state. When added to concrete the fibre will significantly reduce plastic cracking and explosive spalling during fires. Conforms with ASTM1018 in conjunction with JSCE-S14.

RAD12pp



Technical Information

> Material	Virgin Polypropylene	> Fibre Length	12mm
> Color	Milky White	> Fibre Type	Mono - Filament
> Odor	Odorless	> Packaging	900 gram bags
> Melting Point	150 ~ 170 Celsius	> Electrical Conductivity	Low
> Specific Gravity	0.91	> Moisture Content	0.0%
> Viscosity	100 PaS at 190 Celsius 100 1/s	> Standard Dosage	0.9 kg's
		> Alkali resistance	Excellent

Plastic Shrinkage Cracking.



While concrete is in its elastic state a significant amount of stress is present due to rapid evaporation of the water content within the mix. While the concrete is curing, its ability to adhere to bar or mesh type reinforcing is impaired causing the matrix to slip over the reinforcing, thus significantly increasing the risk of cracking. The RAD12pp is distributed evenly throughout the mix and aids in binding the concrete together in the early curing stages maximising crack control.

Description of Spalling.

The heating of a concrete structure as a result of fire is a serious concern as any retained moisture within the concrete causes expansion resulting in smaller pieces of concrete to explode from the surface. This process repeats itself during the fire causing significant damage to the structure. During a fire the Spalling process can start within the first 15 minutes with a surface temperature of just 200 degrees Celsius.

What benefit do the fibres add in the case of a fire?



At 160 degrees Celsius the fibres melt creating a vast number of voids allowing the retained moisture to escape in a non destructive manner, significantly reducing any increase in pressure within the concrete structure. Adding 0.9 kg's of RAD12pp to a cubic metre of concrete is a very cost effective method of fire protection for concrete structures.

Packaging, Storage & Product information

The packaging allows cost saving in transport, storage and handling.

- > 300 grams to 1.2 kilo's - packaging can be catered to customers needs.
- > The entire packaging is thrown into the mix this, allows for easy handling while leaving no waste on site.
- > Allow 3 to 5 minutes at mixing speed for fibres to disperse evenly throughout mix.
- > The fibre can be added to the mix at any stage of batching.
- > Store protected from weather.