

Adfil®Ignis 1812

Synthetic micro-fiber
for passive fire protection

DESCRIPTION

Adfil®Ignis fibres have been used in many projects globally, primarily to provide passive fire protection to the concrete structure in segmental tunnel linings, sprayed or cast in-situ concrete. This product has been proven to control explosive spalling in concrete exposed to fire.

Explosive spalling occurs when moisture in a concrete structure is superheated and turns to steam. Pressure builds up inside the concrete and results in an explosive failure of the exposed face. Adfil®Ignis 1812 will start to melt when the heat generated is approximately 165°C. When the temperature reaches 360°C, the fibres vaporise to leave millions of capillaries in the concrete which allow the steam to escape.

BENEFITS

- Dramatically reduces explosive spalling
- Improves resistance to plastic shrinkage cracks
- Improves hardened state benefits, such as abrasion and impact resistance

APPLICATION

Adfil®Ignis 1812 fibres are applied in a wide range of applications. Examples include sprayed linings, precast segments, and in-situ concrete for:

- Road and rail tunnels
- High rise buildings
- Cable tunnels
- Bridges
- Underground/multi storey car parks

INDICATIVE INFORMATION

Product Nature	100% virgin polypropylene
Color	Transparent
Apparent density	0,905
Fiber length	12 mm
Ignition temperature	360 °C
Equivalent Diameter	18 µm
Tensile strength	434 MPa
Melting point	165 °C

PACKAGING

- 1kg water soluble bags

METHOD OF USE

The optimal dosage of Adfil®Ignis 1812 can be established after trial tests, taking into account local conditions, materials and specification requirements.

When adding fibres into a cementitious product careful attention must be taken in the batching and mixing procedure to achieve optimum results. If you need further details on the recommended mixing instructions, please consult a member of the Chryso team.

PRECAUTIONS

- Adfil®Ignis 1812 is not recommended as a replacement to structural reinforcement
- Fibres must be stored on a clean surface in dry conditions, undercover and away from the possibility of damage

NORMS & REGULATIONS

- Conforms to ASTM C 1116 and BS EN 14889 la
- Plastic shrinkage reduction in accordance to ASTM C1579-13
- Conforms to CE marking EN 14889-2:2006 la

SAFETY

Adfil®Ignis 1812 is not considered dangerous to handle. Prior to any use, please read carefully the Safety Data Sheet (SDS).