

ENDURO® 600

PRODUCT DATA SHEET



ENDURO® 600 MACRO-SYNTHETIC FIBRE

ENDURO® 600 is the latest high performance macro-synthetic fibre developed from the innovative HPP technology which was pioneered by Propex Concrete Systems.

ENDURO® 600 has been specifically designed to satisfy the demanding requirements of modern day sprayed concrete reinforcement and equipment.

FEATURES & BENEFITS

- Geometrically engineered to resist matrix pull-out
- Increases flexural toughness
- Reduces rebound
- Increases cohesion and reduces segregation
- Increases impact and shatter resistance
- Non-magnetic
- Rustproof
- Chemically inert and alkali proof
- Reduced wear on concrete pumps and hoses
- Safe and easy to handle
- Simplified logistics
- Economical alternative to steel wire mesh and/or steel fibres

PRIMARY APPLICATIONS

- Sprayed concrete
- Precast concrete elements
- Tunnel linings
- Mining
- Slope stabilization
- Channel linings
- Pools
- Tanks

COMPLIANCE

Complies with ASTM C III6 Type III 4.1.3

CHEMICAL & PHYSICAL PROPERTIES

Fibre Length	50mm	Acid & Salt Resistance	High
Type/Shape	Macro / Monofilament	Melt Point	164°C (328°F)
Absorption	Nil	Ignition Point	>550°C (1022°F)
Specific Gravity	0.91	Thermal Conductivity	Low
Electrical Conductivity	Low	Alkali Resistance	Alkali Proof

ENDURO® 600

PRODUCT USE

MIXING DESIGNS AND PROCEDURES: The specified dosage per cubic metre should be added to the mixer after batching the other concrete materials. After the addition of the fibres, the concrete should be mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibres throughout the concrete mix.

PLACING: ENDURO® 600 micro-reinforced concrete can be pumped, sprayed or placed using conventional equipment as with other fibrous concrete.

FINISHING: Conventional techniques and equipment can be used when finishing ENDURO® 600 fibre concrete.

DOSAGE RATE: The dosage rate for ENDURO® 600 macro-synthetic fibres will vary depending on the application, mix design and the toughness requirements of each particular project. Typically, ENDURO™ 600 macro-synthetic fibres dosage will be in the range of 5kg to 9kg per cubic meter of concrete. When used in conjunction with Fibermesh® 150 fibres the dosage rate and the performance of the sprayed concrete can be optimized economically.

Propex Concrete Systems technical staff can offer advice on dosage rates once performance requirements have been established by the project designer/engineer.

COMPATIBILITY

ENDURO® 600 macro-synthetic fibres are compatible with all curing compounds, superplasticizers, water reducers, hardeners and coatings.

SAFETY

No special handling is required with ENDURO® 600 macro-synthetic fibres. Full Material Safety Data Sheets are available on request.

PACKAGING

ENDURO® 600 macro-synthetic fibres are collated in degradable paper wrapped bundles or pucks to aid rapid dispersion and mixing. The fibre bundles are packaged in 7kg cartons. Store materials in a cool dry place. Do not store in direct sunlight.

TECHNICAL SERVICES

Propex Concrete Systems is backed by our team of reinforced concrete specialists who can carefully analyze each project and provide fibre reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

REFERENCES

- EFNARC European Specification for Sprayed Concrete
- ASTM C III6 Standard Specification for Fibre-Reinforced Concrete and Shotcrete.
- ASTM C I550 Standard Test Method for Flexural Toughness of Fibre Reinforced Concrete (Using Centrally Loaded Round Panel).
- Publication N° 7 Norwegian Concrete Association

SPECIFICATION CLAUSE

Fibres for concrete shall be ENDURO® 600 polyolefin high performance macro-monofilament fibre and manufactured specifically for the reinforcement of concrete.

ENDURO® 600 macro-synthetic fibres shall be mixed at the batch plant, at the recommended rate ofkg per cubic metre, and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibres throughout the concrete mix. Fibrous concrete reinforcement shall be manufactured by:

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