

EARTH FIBER® PP SHIELD

Embossed Polypropylene
Macro Reinforcement Fibre

Earth Fiber® PP Shield is a high-performance embossed polypropylene macro synthetic fibre designed for concrete reinforcement applications. Its embossed surface enhances bonding with the cement matrix, delivering superior crack control, toughness, impact resistance and post-crack residual strength.

SUITABLE REPLACEMENT FOR STEEL FIBRES

PRODUCT DESCRIPTION

Manufactured from 100% virgin polypropylene, PP Shield features a uniquely embossed, deformed surface for mechanical interlock with concrete. It is engineered to control plastic and drying shrinkage cracks, increase ductility, improve impact and fatigue resistance and enhance the durability and service life of concrete structures.

PP Shield is designed as an effective alternative to conventional steel reinforcement and steel fibres in a wide range of industrial, commercial, pavement, precast and infrastructure concrete applications.

KEY BENEFITS

- ✓ Controls plastic and drying shrinkage cracks
- ✓ Enhances flexural toughness and residual strength
- ✓ Improves impact and fatigue resistance
- ✓ Increases ductility and energy absorption capacity
- ✓ Corrosion-free reinforcement solution
- ✓ Reduces maintenance requirements
- ✓ Excellent alkali and chemical resistance
- ✓ Improves durability and service life of concrete
- ✓ Non-magnetic and non-conductive
- ✓ Easy mixing and uniform dispersion
- ✓ Suitable replacement for steel fibres in many applications



CRACK
CONTROL



ENHANCED
TOUGHNESS



IMPROVED
DURABILITY



CORROSION
FREE



IMPACT
RESISTANCE

TECHNICAL SPECIFICATIONS

Particulars	Unit	Specification
Material	–	100% Virgin Polypropylene
Fibre Type	–	Embossed Macro Fibre
Colour	–	Natural White
Shape	–	Embossed / Deformed
Diameter	mm	0.80 – 0.90
Length	mm	40 – 55
Tensile Strength	MPa	≥ 550
Elastic Modulus	MPa	≥ 6,000
Specific Gravity	g/cm³	0.91
Aspect Ratio	–	> 45
Water Absorption	%	Nil
Alkali Resistance	–	Excellent
Melting Point	°C	> 160
Density	kg/m³	910
Chloride Content	–	Nil
Corrosion Resistance	–	Excellent
Packaging	–	Water Soluble Pucks / Bags
Compliance	–	EN 14889-2
Quality System	–	ISO 9001:2015



EMBOSSD SURFACE FOR
SUPERIOR BONDING

EN
14889-2
COMPLIANT



RECOMMENDED DOSAGE

Application	Dosage (kg/m³)
Industrial Floors	3 – 6
Warehouse Floors	4 – 7
Pavements & PQC	3 – 6
RCC Slabs	2 – 5
Shotcrete	5 – 9
Precast Elements	3 – 6
Heavy Duty Industrial Flooring	5 – 9

Actual dosage shall be determined based on structural design requirements, loading conditions, slab thickness and performance criteria.

APPLICATIONS

- Industrial Flooring
- Warehouse Floors
- Factory Floors
- Pavements & PQC
- Rigid Concrete Roads
- Airport Aprons & Taxiways
- Container Yards
- Logistics Parks
- Precast Concrete Products
- RCC Slabs
- Tunnel Linings
- Shotcrete Applications
- Slope Stabilization
- Retaining Structures
- Infrastructure Projects



INDUSTRIAL FLOORING



PAVEMENTS & PQC



TUNNEL LINING



PRECAST ELEMENTS

MIXING INSTRUCTIONS

- 1 Add aggregates and cement into the mixer.
- 2 Introduce Earth Fiber® PP Shield gradually into the concrete mix.
- 3 Dry mix for approximately 30–60 seconds.
- 4 Add water and admixtures as per approved mix design.
- 5 Continue mixing until fibres are uniformly dispersed.
- 6 Place, compact and finish concrete using standard construction practices.



STORAGE & SHELF LIFE

Store in a dry and covered area away from direct sunlight and moisture.

Shelf life: 24 Months from date of manufacture when stored in original unopened packaging.

HEALTH & SAFETY

Earth Fiber® PP Shield is non-toxic and non-hazardous under normal usage conditions. Appropriate PPE should be worn during handling and construction activities. Refer to the Safety Data Sheet (SDS) for detailed safety information.

PACKAGING

Available in:



WATER SOLUBLE
PUCKS



WATER SOLUBLE
BAGS

CUSTOM PACKAGING OPTIONS AVAILABLE

