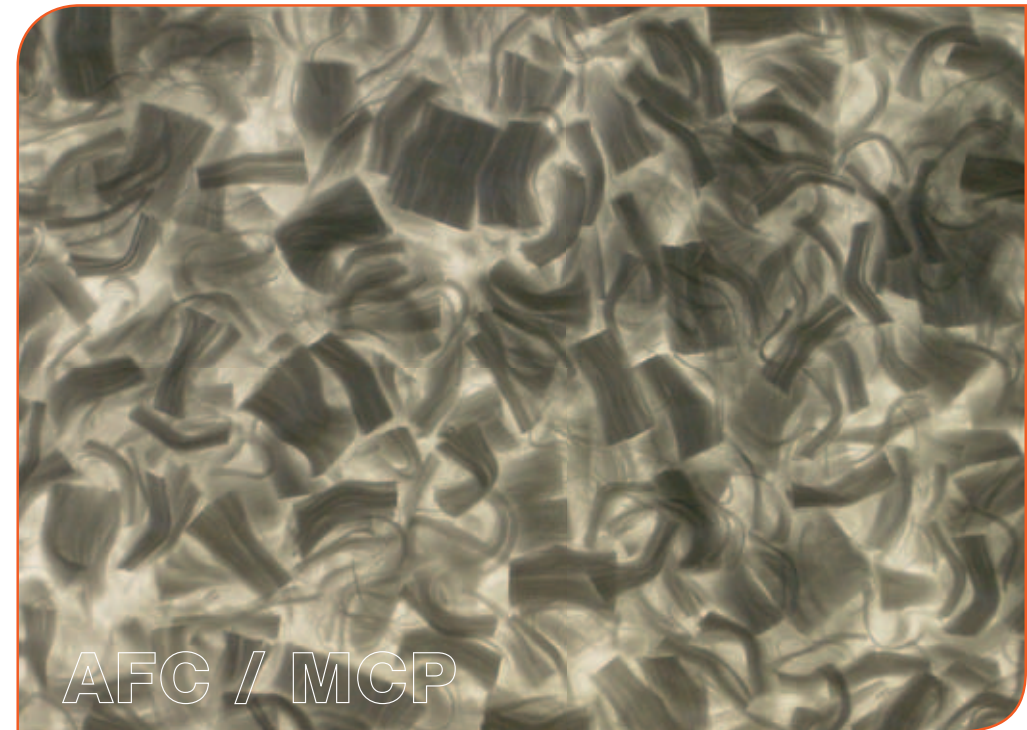
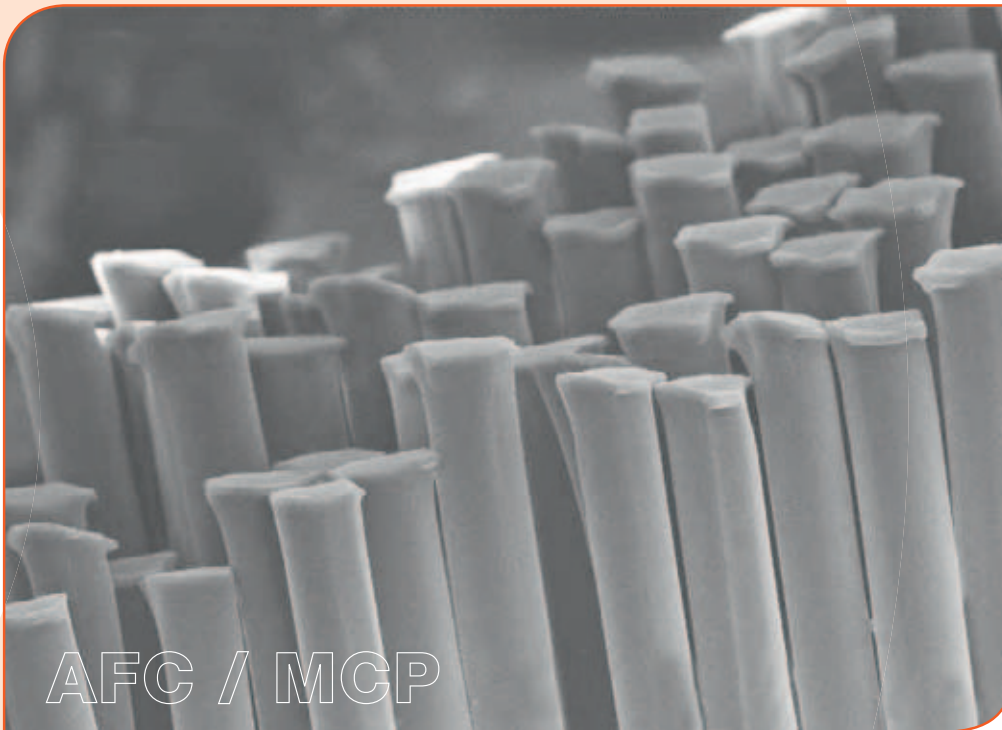


AFC / MCP

**A clear improvement of
the concrete quality**

General

asota[®] AFC (Anti Fire Crack) and MCP (Micro Crack Preventer) are Polypropylene short cut fibres and have been developed for adding to concrete. asota[®] AFC/MCP improves all major properties of concrete.



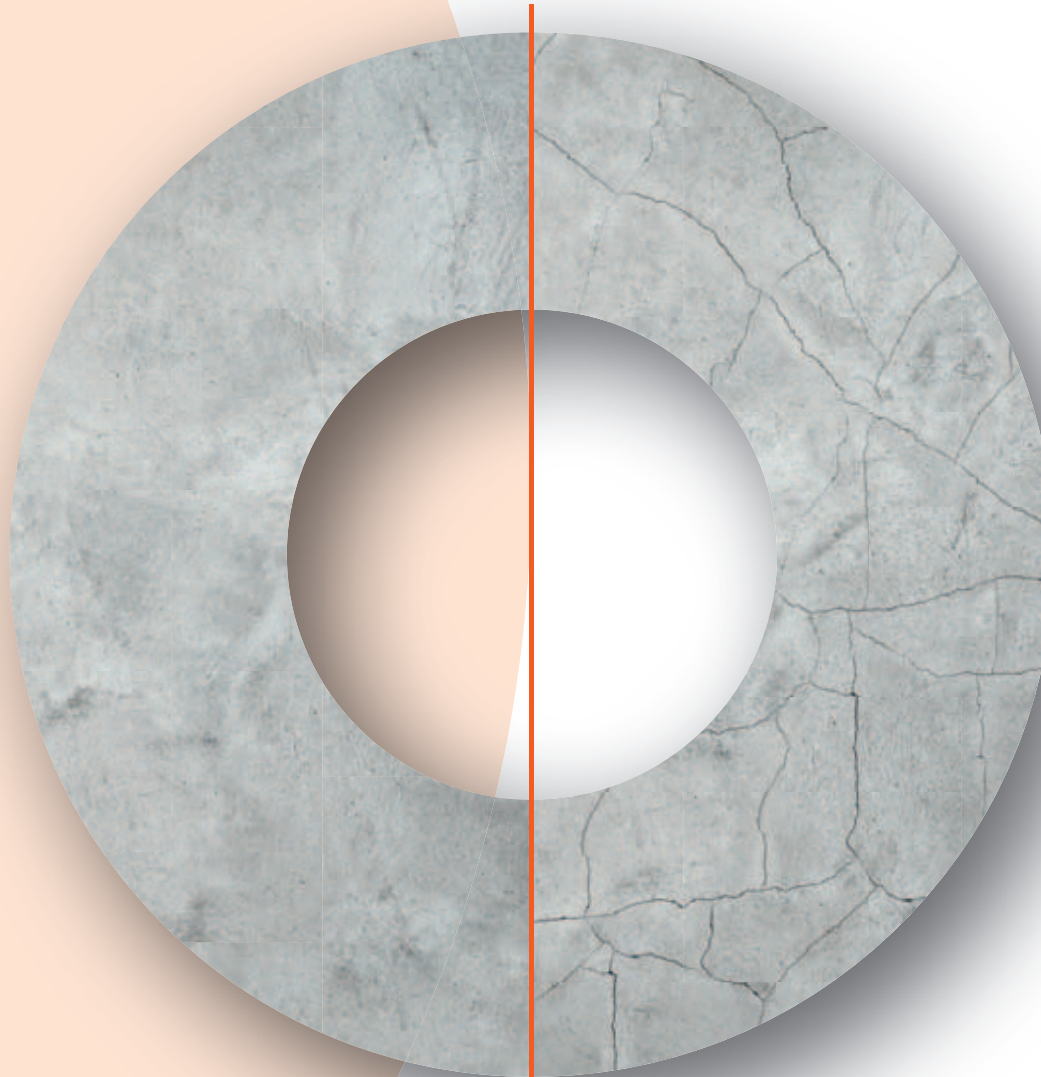
Advantage of asota[®] AFC/MCP

- Reduction of cracks due to shrinkage by up to 100%
- Significant lower damage rate (flaking off) in case of fire
- Clear improvements such as for example ductility and durability
- Significant lower brittleness
- Prevent cracks in asphalt concrete
- Simple handling
- Extremely resistant to chemicals
- Environmentally friendly, does not rot and is corrosion resistant
- Harmless from medical point of view, does not enter the lungs as asbestos for example

asota®

... fibres and more!

Reduction of cracks due to shrinkage by up to 100%

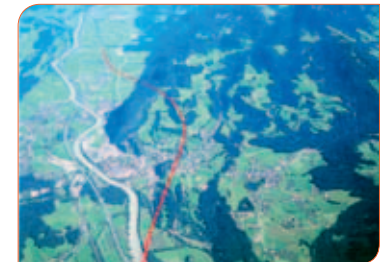


WITH asota® AFC/MCP

WITHOUT asota® AFC/MCP

Applications

- Tunnels
- Foundations
- Bridges
- Cement Floors
- Roadways
- Fire Walls
- Finished Concrete Products
- Cellars
- Subways
- Swimming Pools
- Others



MCP/AFC Fibre Key Characteristics

Fibre characteristics	Unit	MCP 18	MCP 31
Fibre cross section	-	Round	Round
Cut length	mm	6 / 12 / 18	6 / 12 / 18
Number of fibres (12 mm)	Million/kg	379	119
Tear strength	N/mm ²	≥ 400	> 345
Elongation at break	%	≤ 80	≤ 80
Fibre dispergation	-	excellent	excellent
Melting Point	°C	163 – 170	163 – 170
Diameter	Micron	18	31
Density	g/cm ³	0,91	0,91

Recommended quantities to use

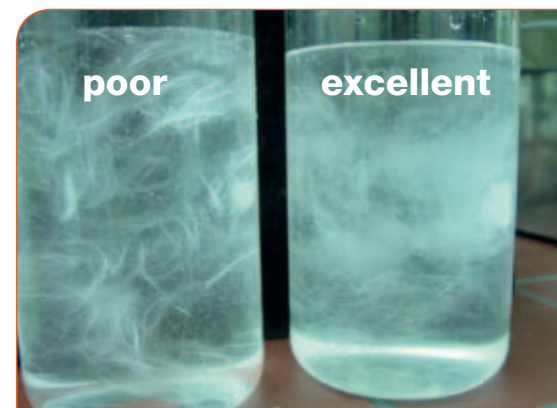
- asota® MCP 0,6–0,9 kg per m³ concrete (1–1,5 lb/cy)
- asota® AFC up to 1,8 kg per m³ concrete (3 lb/cy)

Processing

- Simple in all standard mixing machines
- Fibres can be added to dry and wet compositions
- No special requirements to mixing time
- Concrete mixing car approx. 1 min./m³ concrete
- Concrete mixer approx. 50 sec.

Packaging

- Water soluble paper bags: 0,6 and 0,9 kg (1,3 and 2 lb)
- Cardboard boxes: 250–500 kg (550–1100 lb)
Other units on request



MCP/AFC – Improvement of major concrete properties

Test	Standard	MCP 18	MCP 31
Fibre length	-	12 mm	12 mm
Dosage	-	600 g/m ³	900 g/m ³
Compressive strength	ASTM C 39	+ 5,4%	+ 5,4%
Tensile strength	ASTM D 638	+ 7,9%	+ 10,5%
Flexural strength	ASTM C 1018 ASTM C 1399	+11,4%	+5,7%
Flexural toughness	ASTM C 1018 ASTM C 1399	improved	improved
Abrasion test	IS 1237	25,3% improvement	12,1% improvement
Water permeability	DIN 1048	44,8% improvement	36,1% improvement
Micro cracks	-	No cracks	No cracks

All test results compared to samples without fibre reinforcement.

Full test report available on request.

Test period: March – June 2010

Tests were carried out by: CIVIL-AID Technoclinic Pvt. Ltd.
No.1/4, 2nd Floor Annexe, A.P.E. Trust Building,
N.R. Colony, Bangalore 560 019, India



asota®

... fibres and more!

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