

# STEEL FIBRES-

## WIREMIX 50

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### PRODUCT

Wiremix 50 Fibres are a high quality reinforcing material made from low carbon cold drawn steel with a tensile strength of 1200 MPa (175,000 psi). Wiremix 50 Fibres are manufactured in 25mm (1 inch), 38mm (1 ½ inch), 50mm (2 inch) lengths and 60mm (2 ¼ inch) lengths.

One of the many outstanding characteristics of Wiremix 50 Fibres is the high strength of steel and ease of handling. No sophisticated or expensive equipment is required to achieve uniform, ball free distribution of Wiremix 50 Fibres in the concrete matrix. The undulations along the fibre length provide mechanical anchorage of the fibres into the concrete, enhancing post first crack strength.



### FIBRE SELECTION GUIDE

FIBRE LENGTH mm (inch)	APPLICATION	FIBRE CONTENT	
		lb/yd <sup>3</sup>	(kg/m <sup>3</sup> )
25 (1)	Dry Mix Shotcrete	85 -120	50 - 70
38 (1 ½)	Wet Mix Shotcrete	85 -120	50 - 70
	Thin precast members & overlays	45 - 65	25 - 40
50 (2)	Industrial or Commercial Floors	25 -75	15 - 45
60 (2 ¼)	Airports	65 -100	40 - 60
	Roads	45 -100	25 - 60
	Bridge Decks	75 -135	45 - 80

Product performance is affected by many factors, including storage, method and conditions of application and use. User testing is ESSENTIAL to determine suitability of product for intended method of application and use. Target's SOLE WARRANTY is that the product has been manufactured to specifications. No oral or written information or advice shall increase this warranty or create new warranties. Target's SOLE LIABILITY is to replace product proved defective. In no event shall Target be liable for any consequential, indirect or other damages whether arising from negligence or otherwise.

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### APPLICATIONS

#### Slabs and Overlays

Industrial and commercial slabs on grade, toppings on steel and precast decks, airport runways and parking areas, roads, bridge decks and loading ramps.

#### Precast Products

Security vaults, steps, breakwater units, pipes, manholes and covers, pile tips, tilt-up panels, mine creeps, refractory bricks and panels.

#### Structural Applications

Bridge deck joints, beams and slabs in conjunction with conventional reinforcing, frame connections requiring increased ductility (earthquake or explosion resistant structures) or punching shear improvement.

#### Shotcrete

Slope stabilization, mine and tunnel linings, concrete rehabilitation and restoration, mine stopping, concrete dome structures.

#### Other

Hydraulic structures, military installations, blast resistant structures, creek channelization.

### ADVANTAGES

1. Wiremix 50 Fibre Concrete can give comparable performance at a lower cost or improved performance at a slight increase in cost when compared to conventionally reinforced concrete.
2. Concrete volume requirements may be reduced.
3. Improved toughness.
4. Greatly improved impact, fatigue, and spall resistance.
5. Resistance to salt scaling equal to or better than that of regular concrete.
6. Increased flexural strengths.

### PROCEDURES

#### CONCRETE OR WET PROCESS SHOTCRETE

1. After the mix has been adjusted to the required slump, add the specified quantity and type of Wiremix 50 Fibres to the mixer shortly before discharge and mix until the fibres are evenly dispersed. In transit mixer trucks, a mixing time of two minutes at approximately 16 rpm (maximum drum rotation speed) is usually adequate.
2. Fibre mixes appear stiffer than conventional mixes, but can readily be placed with adequate vibration. Avoid excessive addition of water to steel fibre mixes. High range water reducers can be used with higher dosages of fibres.
3. Place, finish and cure using standard procedures and equipment.

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### CAUTION

To minimize the risk of minor injury when handling or finishing mixes containing steel fibres, gloves should be worn. Gloves of similar quality to those normally worn by concrete placing and finishing crews are adequate. The use of gloves and eye protection during loading of steel fibres into mixers is recommended.

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