

Recron 3s for crack-free construction

Reliance Industry Limited (RIL) has launched *Recron 3s* fibres with the objective of improving the quality of plaster and concrete. The Reliance Group, founded by Mr Dhirubhai H. Ambani, is India's largest business house with total revenues of Rs 65,000 crores. The group's activities span petrochemicals, synthetics fibres, fibre intermediates, gas, power, telecom, etc

Role of Recron 3s

Controls cracking

Recron 3S prevents the micro shrinkage cracks developed during hydration, making the structure/plaster/component inherently stronger. Further, when the loads imposed on concrete approach that of failure, cracks will propagate, sometimes rapidly. Addition of *Recron 3 s* to concrete and plaster arrests cracking caused by volume change (expansion and contraction), simply because 1 kg of *Recron 3s* offers millions of fibres which support mortar/concrete in all directions.

Reduction in water permeability

A structure free from micro cracks prevents migration of water or moisture throughout the concrete. This in turn helps prevent the corrosion of steel used for primary reinforcement of the structure. This results in longevity of the structure.

Reduction in rebound loss

Recron 3s fibre reduces rebound "splattering" of concrete and shotcrete. This reduces wastage of mortar and speeds up the pace of work. More importantly it saves a great deal of labour employed for the job. The gains are higher when plastering is in progress at higher floors, ceilings and outside surfaces of the buildings.

Increase in flexibility

The modulus of elasticity of *Recron 3s* is high with respect to the modulus of elasticity of the concrete or mortar binder. *Recron 3s* fibre helps in increasing flexural strength. The post cracking behaviour has shown its ability to continue to absorb energy as fibres pull out.

Applications

Recron 3s fibres can be used in concrete elements such as RC and PC lintel, beam, column, flooring and wall plastering; foundations, tanks, manhole cover and tiles; plastering; roads and pavements; hollow blocks and precasts.

Direction for use

Sprinkle the fibre in site mixer with little water. Keep rotating and add chips, sand, cement and balance water. Mix it for a few minutes. In case of manual mixing, for best results mix half the fibre in a bucket of water, stir well and mix in mortar. Likewise add balance fibre.

Recron 3s is meant for improving the quality of construction, savings on wastage and for speeding up the work pace. *Recron 3s* is meant for secondary reinforcement only.

The above information is based on the brochures of *Recron 3s*.

Specifications of Recron 3s

Property	Value
Cut length	: 6 mm or 12 mm
Shape of fibre	: special for improved holding of cement aggregates
Tensile strength	: 4000-6000 kg/cm ²
Melting point	> 250°C
Dosage rate	: <i>Concrete</i> Use CT 2024 (12 mm) at 909 g/m ³ <i>Plaster</i> Use CT 2012 (6 mm) at 125 g/cement bag 1:4 cement/sand ratio Optimise as per application

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