

TYTAN

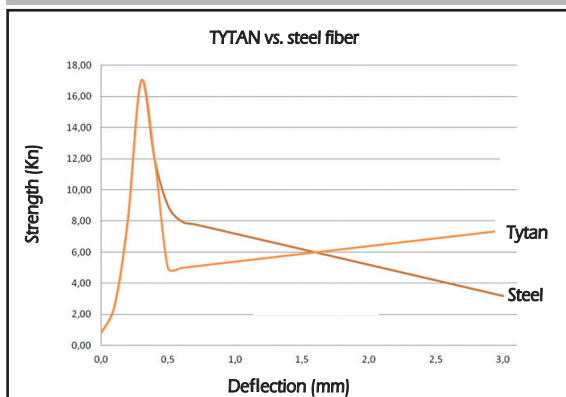
CONCRETE HIGH TENACITY SYNTHETIC FIBRES

TYTAN STRUCTURAL FIBRE

TYTAN structural fibres are a new and worthy alternative to the flexible highstrength polymer fibres, specifically designed to structurally reinforce concrete. This fibre has in fact a high tensile strength to be able to improve the post-cracking behaviour in a comparable manner. Unlike conventional fibrillated and monofilament synthetic fibres which are added to concrete for the control of plastic shrinkage cracking, TYTAN fibres are used in concrete to improve material properties including toughness (post-crack energy absorption), impact and fatigue resistance and control of plastic shrinkage cracking. TYTAN fibres provide significant cost effective improvements compared to the use of traditional reinforcing systems and also to some steel fibres with an absolute minimum of impact on concrete workability and ease of placement. TYTAN fibres are stiff, undulated, monofilament synthetic fibres, lengths between 40 and 55 mm and consisting of a unique polymer composition. The individual fibres are bundled during the production process into "PUC's", enclosed by a water soluble foil which dissolves during the mixing process. The fibres will then spread homogeneously throughout the concrete as individuals. This dispersion system guarantees the homogenous en continuous mixing of the fibres in the concrete mixture. The toughness values of the TYTAN fibre have been confirmed by different independent research centres through extensive testing.

CE LABEL: CONFORMS TO EN 14889-2

TYTAN POST-CRACK BEHAVIOUR



TYTAN TYPICAL PROPERTIES

Specific Gravity	0,91 g/cm ³
Absorption	none
Modulus of Elasticity Tensile	± 5,5 GPa (798 ksi)
Strength	± 500 MPa (84 ksi)
Melt Point	160°C (320°F)
Ignition Point	590°C (1094°F)
Alkali, Acid & Salt Resistance	High

TYTAN ADDITION RATES

TYTAN addition rates are dependent on the specific application, design and desired properties and will vary between 4.0 to 12.0 kg/m³.

PROPERTIES TYTAN CONCRETE

Significant increases of:

- Flexural Strength
- Impact and Fatigue Resistance
- Shear Strength
- Resistance to Cracks and Spalling
- Toughness: substantial improvement of load carrying capabilities of TYTAN concrete after the first crack occurs.

MAIN APPLICATIONS

- Industrial and agricultural flooring
- Constructions in aggressive environment
- Préfabricated products
- Swimming pools and external concrete elements

ADVANTAGES vs. MESH

- Quick and easy working
- Reinforcement equally spread throughout depth
- Safe and simple access to the job site
- Reinforcement always at the right place

PROCESSING TYTAN CONCRETE

Because of their bundled concept TYTAN fibres are easy to apply both at the concrete batching plant and on the job site. All types of concrete pumps and shotcrete equipment have been used successfully to place TYTAN reinforced concrete. Because of the robust structure of the individual fibres, the fibre count per unit of weight is much less than experienced with other structural fibres. As a result, less fibres will be needed to be camouflaged in the finishing phase of the concrete surface.



PACKAGING

TYTAN fibres consist of water soluble PUC's, each about 100 gr in weight. These PUC's are packed in cardboard boxes of 5 kg net weight each. One pallet consists of 165 boxes, 825 kg/pallet in total weight.

**PROFESSIONAL DESIGN
SERVICE AVAILABLE !**

DESIGN AND LOGISTICS

For request of technical designs and commercial Information please contact us directly.