

**FORTIUS**

# I-Beton 39

## Structural polymeric fibers for fiber-reinforced concrete

*I-Beton 39 fibers are structural synthetic fibers manufactured with high-strength and ductility pure materials, designed and engineered to replace metal wire-mesh and metal fibers, aimed at providing secondary reinforcing as well as increasing the overall structural performance of concrete.*

### *I-Beton 39 ADVANTAGES:*

#### **STRUCTURAL FUNCTION**

Highly resistant polymers make ISTRICE fibers excellent; it maintains its stability characteristics over time, also in works with significant exposure to the environment.

#### **EFFECTIVENESS**

Maximum adherence, do not segregate and spread three dimensionally, guaranteeing uniform, widespread distribution

#### **LIGHTNESS**

Marked resistance to traction and rigidity combined with excellent characteristics like light weight and ductility; particularly appropriate for works in seismic zones

#### **VERSATILITY**

Variations in dosage can satisfy any demands in the design phase or the worksite, from anti-cracking to structural demands.

#### **SAVING**

no installation costs, working time reduction, excellent

resistance to wear and damage and reduction in maintenance costs.

#### **CHEMICAL INERTNESS**

Immune to oxidation and corrosion problems caused by chlorides, sulfates, mold, rust, etc., particularly indicated for aggressive environments, such as marine environments and chemical industries.

#### **ENERGY SAVINGS**

Low processing costs in respect to steel; light weight and low dosages require less transport costs and less fuel consumption.

#### **RESPECT THE ENVIRONMENT**

Production in absence of toxic emissions; the released smoke is not hazardous in the event of fire; preventing the risk of spalling; no magnetic interference; used in the hospital places, in precision mechanics, in automated warehouses, etc.

#### **SAFETY ON WORKSITE**

Easy to use, inserted into the concrete mixing plant or into the concrete mixer. ISTRICE fibers reduce time and effort necessary to workers on site and eliminate accidents caused by metallic fibers and mesh.

#### **I-Beton 39 FIBERS' MAIN FEATURES**

1. Exclusive and innovative design guarantees the best adhesion with the concrete mixture
2. the aspect ratio (i.e. surface to volume) do not compromise the mixture workability properties

3. fibers yield 3D reinforcing property within the mixture, which let a homogeneous and diffuse performance enhancement without clots and nests
4. manufactured with high density thermoplastic polymeric material accounts for high strength and ductility
5. Performance is stable over a long time, even in aggressive environments such as sea-front areas, chemical reactors, digesters, pools ets.

- Resistance to wear in concrete

IBETON fibers comply with the standards set forth in Standard UNI EN 14889-2 for structural use in concrete and obtained ECmarking with only 3kg/m<sup>3</sup>.

The above mentioned values are indicative and are provided without any guarantee. **BK International** does not assume any responsibility resulting from the application of these data.

#### INTENDED USES

- RIGID CONCRETE FLOORS
- FLOORS SUBJECTED TO HEAVY LOADS OR ELEVATED DYNAMIC LOADS
- PARKING AREAS AND AIRPORT RUNWAYS
- STORAGE AREAS
- FOUNDATION LAYERS
- PRE-COVERING IN TUNNELS
- CONSOLIDATION OF EXCAVATION FRONTS
- CONSOLIDATION OF WALLS
- DECKS AND FLOOR LABS
- EXTRUDED ROADWAY STRUCTURES (CURBS, FRENCH DRAINS AND NEW JERSEY)
- SAN AND CEMENT UNDERLAYMENTS
- PRECAST PRODUCTS
- PLASTERS AND MORTARS

#### I-BETON 39

I-BETON 39 is a structural polymeric fiber designed to improve the durability and mechanical properties of concrete.

I-BETON fibers permits to:

- Reduce and, in some cases, even totally eliminate cracking caused by plastic shrinkage
- Increase resistance to flexion
- Ductility