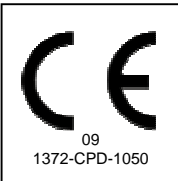


WIRAND[®] FIBRE FF3

DESCRIPTION:

Cold drawn steel wire fibre WIRAND[®] FF3, for structural concrete reinforcement.

NOMINAL DIMENSIONS:



- Diameter D: 0.75 mm
- Length L: 50 mm
- Aspect ratio L/D: 67
- Number of fibres/kg: 5700

MECHANICAL PROPERTIES

R_m (Tensile strength of the wire): 1230 MPa
 ΔL (ultimate strain): < 4%

SHAPE

The double end hooks of WIRAND[®] FF3 fibres ensure perfect anchorage in concrete.
 Effect on strength of concrete: 20kg/m³ to obtain 1.5N/mm² at CMOD=0.5mm and 1.0N/mm² at CMOD=3.5mm.
 Effect on consistency with 20kg/m³ of fibre: vebe time: 7 s

REFERENCE STANDARDS

- EN 14889-1: 2006 - Fibres for concrete — Part 1: Steel fibres — Definition, specifications and conformity;
- UNI EN 14845-2:2007 - Test method for fibres concrete—Part II: Effect on concrete;
- EN 14651-2005 - Test method for metallic fibre concrete - Measuring the flexural tensile strength (limit of proportionality (LOP), residual)
- UNI 11037: 2003 – Fibre d'acciaio da impiegare nel confezionamento di conglomerato cementizio rinforzato;
- UNI 11039: 2003 – Steel fibre-reinforced concrete—Part 1: definitions, classifications, specifics and conformity; Part II: Test method used to determine the early crack strength and ductility indexes;
- ASTM A820: 2001 - "Standard Specification for Steel Fibers for Fiber-Reinforced Concrete;
- CNR – DT 204/2006 – Istruzioni per la progettazione, l'Esecuzione ed il Controllo di Strutture di Calcestruzzo Fibrorinforzato;
- RILEM, 2001 - "Test and design methods for steel fibre reinforced: uniaxial tension test for steel fibre reinforced concrete", RILEM TC 162- TDF Recommendations, Materials and Structures.

PACKAGING

WIRAND[®] FF3 fibre are delivered in big bags of 600, 750, 950 kg or in carton boxes of 20 kg.

STORAGE

The producer, for his optimisation and improving process of the product's technical characteristics, has the faculty to modify the standards and the characteristics of the product without any pre-advise. All the information are given in base to our experience; in any case no responsibility for an incorrect use could be referred to the producer or one of his distributors.



Figure 1

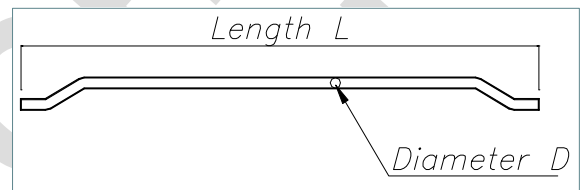


Figure 2



Figure 3



Figure 4

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Bureau Veritas Certified Quality System Company
 with SINCERT's and UKAS' s accreditation.