Macrosol R Structural Synthetic Fibres

TECHNICAL DATA SHEET LR 50/40 SS

Macrosol R – Polypropylene fibres for concrete and mortar reinforcement

1. General

1.1 Description:

Macrosol fibres are extruded from a natural virgin Polypropylene homo polymer, formed into a waved profile for concrete and mortar reinforcement and other composite materials

1.2 Qualities

Standard quality
- Polypropylene compound

1.3 Coatings (If Applicable)

1.4 Concept and terms

L	: the nominal length in mm,
de	: the nominal diameter in mm,
Factor λ	: the length-to-diameter ratio (*L/d*). This parameter is important to the properties of the concrete or mortar for which Macrosol fibres are used.

2. Explanation of used symbols

○	Form of delivery:	L = Loose
○	Shape of fibre:	R = Round Corrugated Shaped anchorage
○	Performance class:	is approximately the (*L/d*) = 50
○	Length of the fibre:	indicative length of the fibre in mm = 40 mm
○	Fibre Type:	SS = Structural Synthetic fibre

2.1 No of fibres per kg

Approximately 44 000 per kg (Calculated)

3. Properties based on ASTM Requirements

3.1 Nominal fibre diameter (*d*): See table 1

Table 1: Nominal fibre diameter (*d*) and tolerance

de – 0.8 mm

3.2 Nominal length (*L*): See table 2

Table 2: Nominal length (*L*) and tolerance

L – 40 mm

3.3 Tensile strength (*R/m*): See table 3

Table 3: Tensile strength (*R/m*) – N/mm²

N – 400 N/mm²

3.4 Factor λ (Aspect Ratio):

L/d – 40 mm/.8 = 50

3.5 Melting point (°C)

150°C to 170°C

3.6 Fibre density (g/cm³)

0.88 – 0.92

3.7 Colour

Translucent or Black

3.8 Elongation at yield (%)

Between 15 and 25%