

Product

PolyMacro Structure

Type

ST-42

Aspect Ratio

52.5



Technical Data Sheet

EESF® PolyMacro ST-42



Product Description

EESF® Macro synthetic Fiber Poly Macro ST-42 Fiber is a high-performance synthetic fiber made from virgin polypropylene (PP) or copolymer materials. It is designed to replace traditional steel mesh or steel fibers in concrete reinforcement. The black color comes from the addition of carbon black, which improves UV resistance and durability in outdoor applications. These macro fibers provide excellent crack control, impact resistance, and post-crack toughness. They are evenly dispersed in the concrete mix and do not rust or corrode, ensuring long-term performance even in aggressive environments.

Advantages

- Enhances flexural toughness and residual strength
- Improves crack resistance and impact strength
- Provides long-term durability and corrosion resistance
- UV-stable due to carbon black additive
- Easy and safe to handle compared to steel fibers

Product Data

Composition	100% virgin copolymer / polypropylene
Type	Macro Synthetic Fiber
Length	42 mm (min tolerance 2%)
Standard	EN 14889 Part II Type II, ASTM C1116 Type III
Aspect Ratio	52.5
Color	black
Specific Weight	0.91gr / cm3
Elastic Modulus	min. 3.9 GPa
Tensile Strength	450 MPa
Corrosion	Non-corrosive
Chemical Resistance.	Alkali and acid resistance
Melting Point	165° C
Magnetism	Non-magnetic

Dosage

Doses of synthetic macro fibers varies between (1.8 and 4.5) kg/m³ depending on engineering requirements of the projects.



Packing

5 kg - 9kg Carton Packs

Usage

- Industrial floors and pavements
- Shotcrete and tunnel linings
- Precast concrete elements
- Marine and coastal concrete works
- Hydraulic structures such as canals, spillways, and dams



Speciation Compliance

EESF® PolyMacro ST-42

is manufactured according to EN ISO 9001 standards and has full British Board



CERTIFICATE

Certificate of Registration

TEAM QUALITY MANAGEMENT SYSTEMS

This is to Certify that the Quality Management System of

EGYPTIAN EUROPEAN FOR MANUFACTURING STEEL FIBER

Villa 306, Al Yasmine 6, 5th Settlement New Cairo, Cairo – Egypt.

Has been found to be of the Quality Management System Standard

ISO 45001:2018

(Occupational Health and Safety Management Systems)

This certificate is valid for the following product or service range

Manufacture of Steel Fiber for Ready- Mix Concrete

Certificate No. : TQO24100601

Date of initial registration	06-10-2024
Date of this certificate/Issue No.	06-10-2024
Certificate Expiry	05-10-2025
Recertification Due	05-10-2027



*After successful completion of Annual Surveillance Audit, New certificate will be issued.

This Certificate is valid per Rules and Regulations of TQ & also the surveillance audits conducted atleast once a year
To check the certification validity please visit our website- www.tq.com.eg or contact at- info@tq.com.eg



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Accreditation by EGAC Kornish El-Maadi, Riad El-Maadi Tower 1 - Cairo - Egypt



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ISO 9001:2015 (Quality Management System)

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