FIBERMESH®

- REPLACES STEELMESH IN GROUND FLOOR & HOLLOW POTS.
- USED IN PLASTER & SCREEDS TO INCREASE DURABILITY.

FIBERMESH® 300-e3

PRODUCT DATA SHEET

FIBERMESH® 300-e3 MICRO-SYNTHETIC FIBRE

Fibermesh® 300-e3, formerly known as Inforce™ e3®, micro-reinforcement fibres for concrete are 100 percent virgin homopolymer polypropylene graded fibrillated fibres containing no reprocessed olefin materials. Specifically engineered and manufactured in an ISO 9001-2000 certified facility for use as concrete reinforcement at the recommended dosage rate of 0.9 kg per cubic metre (0.1% by volume) for effective performance.

ADVANTAGES

Non-magnetic • Rustproof • Alkali proof • Requires no minimum amount of concrete cover • Is always positioned in compliance with codes • Safe and easy to use • Saves time and hassle.

FEATURES & BENEFITS

- Inhibits and controls the formation of intrinsic cracking in concrete
- Increases cohesion and reduces segregation
- Reduces settlement and bleeding
- Reduces plastic shrinkage and settlement cracking
- Increases impact and shatter resistance
- Reinforces against abrasion
- Reduces freeze/thaw damage
- Provides improved toughness/ durability
- Provides residual strength
- Alternate system to traditional reinforcement when used for secondary (crack control) reinforcing in concrete.

e3™ Technology

e3™ technology is another innovative development pioneered by SI® Concrete Systems.
Just as graded aggregates enhance concrete, Fibermesh®300 with e3 technology is a blend of graded fibres designed to enhance the distribution and performance of fibre reinforcement. Each package of Fibermesh®300-e3 fibres is engineered in three ways - by length, thickness and mix ratio. The result is superior combinations of crack control and overall concrete performance.

PRIMARY APPLICATIONS

- Ground supported slabs
- External roads & pavements
- Driveways
- Sprayed concrete
- Precast
- Overlays and toppings
- Tanks & pools
- Walls

COMPLIANCE

- ISO 9001-2000 Quality Assured
- Complies with ASTM C 1116 Type III 4.1.3
- British Board of Agrément accredited. Certificate N° 92/2857

BBA BRITISH BOARD OF AGRÉMENT CERTIFICATE No 92/2857

CHEMICAL & PHYSICAL PROPERTIES

Fibre Length	Various	Acid & Salt Resistance	High
Type/Shape	Graded / Fibrillated	Melt Point	162°C (324°F)
Absorption	Nil	Ignition Point	593°C (1100°F)
Specific Gravity	0.91	Thermal Conductivity	Low
Electrical Conductivity	Low	Alkali Resistance	Alkali Proof

SI® Concrete Systems

For those who prefer performance to tradition

FIBERMESH® 300-e3

PRODUCT USE

MIXING DESIGNS AND PROCEDURES: Fibermesh® 300-e3 micro reinforcement is a mechanical, not chemical, process. The addition of Fibermesh® 300-e3 graded fibrillated fibres do not require any additional water nor other mix design changes at normal rates. Fibermesh® 300-e3 fibres can be added to the mixer before, during or after batching the other concrete materials. After the addition of the fibres, the concrete should be mixed for sufficient time (minimum 5 minutes at full mixing speed) to ensure uniform distribution of fibres throughout the concrete.

PLACING: Fibermesh® 300-e3 micro-reinforced concrete can be pumped, sprayed or placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with Fibermesh® 300-e3 micro-reinforced concrete.

FINISHING: Fibermesh® 300-e3 micro-reinforced concrete can be finished by any finishing technique. Exposed aggregate, broomed and tined surfaces are no problem.

DOSAGE RATE: The recommended dosage rate for Fibermesh® 300-e3 fibres, to achieve effective performance, is 0.9kg per cubic metre. For speciality performance please contact your local SI® Concrete Systems representative for recommendations regarding increased application rates.

GUIDELINES

Fibermesh® 300-e3 fibres should not be used to replace structural, load bearing reinforcement. Fibermesh® 300-e3 fibres should not be used as a means of using thinner concrete sections than original design. Fibermesh® 300-e3 fibres should not be used to increase joint spacing past those dimensions suggested for un-reinforced concrete.

COMPATIBILITY

Fibermesh® 300-e3 fibres are compatible with all concrete admixtures and performance enhancing chemicals, but require no admixtures to work.

SAFETY

No special handling is required with Fibermesh® 300-e3 fibres. Full Material Safety Data Sheets are available on request.

PACKAGING

Fibermesh® 300-e3 fibres are available in standard 0.9kg degradable paper bags, which are designed to be placed directly into the concrete mixer without opening.. They are also available upon request in a variety of packaging options to suit application. Fibermesh® 300-e3 fibres are packaged, packed into cartons, shrink wrapped and palletized for protection during shipping.

TECHNICAL SERVICES

SI® Concrete Systems is backed by our team of reinforced concrete specialists who can carefully analyze each project and provide fibre reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

REFERENCES

- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 22 Non-structural cracks in concrete.
- Fibermesh® Guidance notes for Fibermesh® Reinforced concrete ground supported slabs.
- British Board of Agremént (BBA) Certificate N° 92/2857 Fibermesh® Fibres for Concrete.

SPECIFICATION CLAUSE

Fibres for concrete shall be Fibermesh® 300-e3 micro-synthetic graded fibrillated fibres (100 percent virgin polypropylene fibres produced to ISO 1873-PP-H classification code FN 28-02-045 and containing no reprocessed olefin materials) specifically engineered and manufactured in an ISO 9001-2000 certified facility for use as concrete secondary reinforcement.
The fibre manufacturer must document: evidence of a minimum of 5 years satisfactory performance history; British Board of Agrement accreditation and certify a minimum Average residual Strength (ARS) of 0.35MPa according to ASTM 1399.
Fibermesh® 300-e3 fibres shall be added to the concrete at the batching plant at the recommended dosage rate of 0.9kg per cubic metre and mixed for sufficient time (minimum 5 minutes at full mixing speed) to ensure uniform distribution of the fibres throughout the concrete.

Fibrous concrete reinforcement shall be manufactured by:
SI® Concrete Systems, SI® House, 9 Royal Court, Basil Close, Chesterfield, Derbyshire, S41 7SL. United Kingdom.
Telephone: + 44 (0) 1246 564200, Fax: + 44 (0) 1246 564201,
e-mail: enquiries@sind.co.uk

SI® Concrete Systems

For those who prefer performance to tradition

USA
4019 Industry Drive
Chattanooga, Tennessee 37416
TEL: (423) 892-8080
FAX: (423) 892-0157

INTERNATIONAL
SI® House, 9 Royal Court, Basil Close,
Chesterfield, Derbyshire, S41 7SL. UK
TEL: +44 (0) 1246 564200
FAX: +44 (0) 1246 564201

www.siconcretesystems.com

WHEN YOU USE FIBERMESH YOU ARE IN GOOD COMPANY

Concrete roads & plaster

Roads & warehouse

Storage area & Roads

Heavily loaded warehouse

Heavily loaded car park

Warehouse

400,000 Sq. Ft Warehouse

Ground floor slabs

Cold stores

Loading & Offloading Berth

Heavily loaded hardstand

Heavily loaded hardstand

Depot & hardstands

Container yard

Seamless Concrete Floors

Floor Screeds

Rumbak

Nairobi

Multi-storey Hollow pot

Multi-storey

Housing Estate

SDV Transami (U) Ground Floor Slab

Godowns

Hangar

Ground Floor Slab

Warehouse

Factory

Warehouse

Trax Kenya Warehouse

Hangar

PVS Temple

ISK School

Shopping Mall

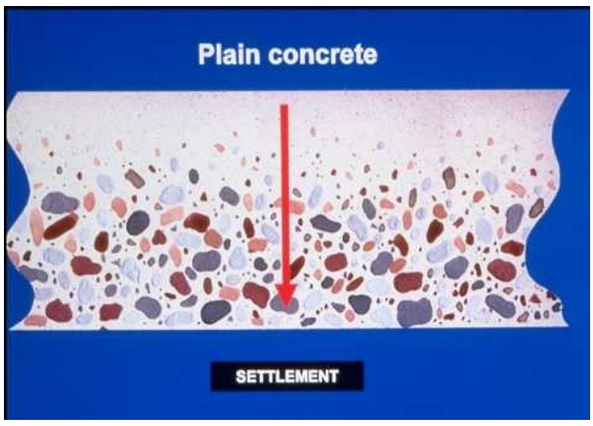
NSSF Houses Embakasi

Godowns

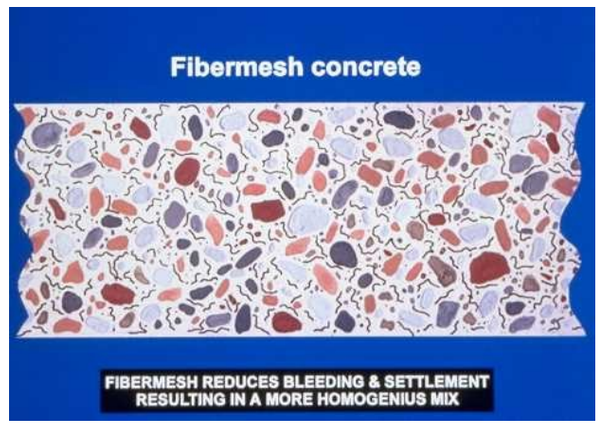
Fibermesh improves impact resistance, abrasion resistance, shatter resistance and it reduces drying, shrinkage and cracking potential of concrete, water migration/ permeability and corrosion of rebar

Reputable contractor unable to position BRC Mesh

Mesh in sub base. Please do not waste money



Settlement of aggregate produce a weak surface



Fibermesh improves impact and abrasion

Used Fibermesh instead of steelmesh in Hollow Pot slabs

Used Fibermesh instead of steelmesh in Ground floor slab

Fibermesh ideal for power floating

Fiber Reinforced Concrete	Normal Reinforced concrete
• High Durability	• Lower Durability
• Protect steel from Corrosion	• Steel potential to corrosion
• Lighter materials	• Heavier material
• More expensive	• Economical
• With the same volume, the strength is greater	• With the same volume, the strength is less
• Less workability	• High workability as compared to FRC.

SOMERS ENGINEERING LTD, P.O.BOX 66143-00800, NAIROBI, KENYA.
TEL: 0722 882088; E-MAIL: build@somerseng.com