



100% RECYCLED

MACRO SYNTHETIC FIBRES FOR **CONCRETE REINFORCEMENT**

✓ SUSTAINABLE

✓ SAFER

✓ FASTER

✓ ECONOMICAL



An Australian innovation, eMesh by Fibercon recycles plastic to deliver innovative reinforced concrete.

Small recycled macro synthetic fibres are added to concrete to replace shrinkage steel.

eMesh completely replaces non-recycled plastic fibres or steel reinforcing mesh.

100% recycled eMesh macro synthetic fibres can give up to 90% reduction in CO2 compared to steel mesh.

The fibres are manufactured in Australia.

Source: LCA, JCU, Dr. Shi Yin 2015 + EPD-S-P-00864



APPLICATIONS

EMESH FIBRES

Councils, Large Infrastructure Projects, Developers, Architects, Landscape Architects and Mining Companies seek out our product for a range of applications based on third-party Audited Environmental Declaration and technical performance eMesh fibres are ideal for footpaths, bikeways, drains, driveways and pavements.

eMesh can be used for thin toppings where it is impossible to place mesh with sufficient cover.

eMesh is also ideal for aggressive marine environments, as it won't corrode and survives both highly acidic and alkaline environments.

These are the most common applications:

- Footpaths
- Shared user paths
- Traffic island infills
- Drains and batters –shotcrete or formed
- Landscaping
- Outdoor patios/entertainment areas
- Commercial and industrial light duty slabs
- Ground slabs for small shed builders

EMESH PRECAST

eMesh precast offers many advantages, especially for smaller and thinner products. Not having to place mesh and bar can lead to quicker production and cost savings. eMesh eliminates worries about concrete cover and corrosion issues.

These are the most common applications:

- Precast drainage pits and risers
- Precast wingwalls/headwalls
- Precast tanks
- Difficult to cast products
- Highly aggressive environments
- Marine applications

NEXT GENERATION

eMesh fibres represent the next generation of innovation for replacing steel mesh and light steel bar in concrete.

Benefits at a glance:

- Environmentally friendly – uses 100% recycled plastic
- Cost-effective – saves time and money with increased durability
- Faster and safer to use – reduces construction time
- Third-party Audited - Environmental product declaration
- Australian-made innovation – Winner Shell & “The Australian” Innovation challenge Awards - 2015 Construction Category



ADVANTAGES

✓ SUSTAINABLE

eMesh can save upto 90% of CO2 compared to steel mesh

- + Can reduce ozone depletion up to 76%
- + Can reduce eutrophication up to 90%
- + Can reduce fossil fuel usage up to 93%
- + Can reduce water consumption in manufacturing up to 90%
- + Can reduce human toxicity and remove eco-toxicity

Source: LCA, JCU, Dr. Shi Yin 2015

✓ FASTER

eMesh is simpler and faster to use as it dispenses with the need to cut steel mesh or maneuver mesh and bar chairs. The product is easy to place and finish using a steel trowel or broom.

✓ SAFER

Using eMesh offers the opportunity to reduce injury risks for workers, as there is no cutting and tying of steel mesh or chairing up required. Public injury risks during construction are also removed by eliminating trip hazards caused by using steel mesh.

✓ ECONOMICAL

The eMesh product can actually reduce costs as it arrives on site ready to use eMesh.

It also offers three dimensional reinforcement throughout concrete and correct placement right off the bat. Unlike steel mesh, there is no need for an engineering inspection.

HOW TO SPECIFY

EMESH – 100% RECYCLED MACRO PLASTIC FIBRES

To achieve the best performance from your eMesh in your concrete and maximum CO2 reductions, the specifications are:

- eMesh Fibres by Fibercon reinforcement added to the concrete at 4 to 6 kg/m³
- Fibres are to be made solely from 100% recycled macro synthetic and to be 47mm in length

Fibres will conform to provisions of:

eMesh Fibres – CO2 reductions of upto 90% in accordance to ISO14040 / EPD-S-P-00864

- TR65 - Guidance on the Use of Macro-Synthetic Fibre Reinforced Concrete
- ASTM – C 1116 03 – Standards for Specification for Fibre Reinforced Concrete and Shotcrete
- BS EN 14889 - Fibres for concrete – Part 2 – Polymer Fibres.

EMESH NOW

- eMesh is approved for use in Victoria under VicRoads 703 for use on MRPV and MTIA projects
- eMesh conforms to VicRoads 703 and 705
- Manufactured conforming to EN14889
- eMesh conforms to MRTS273 and is eMesh is a approved product
- eMesh is a registered product on Isupply Portal and Sustainability Victoria Buy Recycled Portal
- eMesh has a registered and third-party audited EPD which confirms to ISO1402

RECENT PROJECTS

- NWPA Bell to Moreland LXP
- SEPA Toorak Road LXP
- M80 Upgrade
- NIF Rail Maintenance Facility
- Mordialloc Bypass
- SEPA M2M LXP
- Haughton River Floodplain Upgrade
- ACT Healthy Waterways
- Arrowheads Artificial Reef Units
- West-connex Rozelle Interchange
- WPA Old Geelong Road LXP
- E2G Southern Access
- MTMS North & South Rail Upgrades NSW
- TAP3 TfNSW
- Daintree Gateway Project
- Over 30 Local Councils across Australia

TECHNICAL DATA

Fibre	100% Recycled Macro Synthetic Fibre for concrete reinforcement
Minimum Tensile Strength	400 MPa
Fibre length	47mm
Modulus of Elasticity	6.0 GPA
Thickness – Equivalent	<0.5mm
Tolerances	+ or – 5%
Aspect ratio	100
Anchorage	Diamond Indent Continuously Deformed
Appearance	Grey Macro
Complying	ASTM C 1116, Type III

We are proud members of :



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