ADFIL
Construction Fibres

Short Guide
Precast Applications

Synthetic Fibre Reinforced Concrete

DURUS® Macro Fibre

CRACKSTOP® M Ultra | IGNIS® Micro Fibre

Progress through performance
A Low&Bonar solution

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Synthetic Fibres can be used in precast elements, either as the primary reinforcement or in combination with conventional steel bar or mesh. The following factors must be considered when considering their application to replace steel bars or mesh:

Relevant parameters

- Concrete strength
- Concrete durability class
- Concrete surface finish
- Loading & lifting capacity of each element (de-moulding)
- Live loading of the element when in use
- Type and dosage of fibres used

Advantages of Synthetic Fibre reinforcement in precast concrete elements

- 3D reinforcement
- Significant time savings
- Reduction or elimination of steel cage construction
- Quicker casting of elements
- Increased production rate
- Reduction in post cast remediation

Functions synthetic fibre reinforcement in precast concrete elements

- Provide post crack residual flexural strength
- Improve the quality of the cast surface finish by eliminating or reducing segregation and entrapment of concrete around conventional steel reinforcement
- Reduce the occurrence of plastic shrinkage cracking
- Ensures the correct positioning of reinforcement throughout the concrete
- Provide passive fire resistance by reducing explosive spalling

Significant Cost Savings

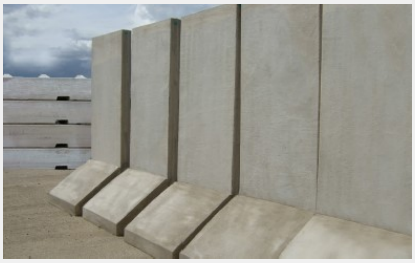
- Reduction or elimination of steel reinforcement
- Less reinforcement fixings needed
- Reduction of required manpower
- Improved efficiency of production facilities

Adfil Assistance

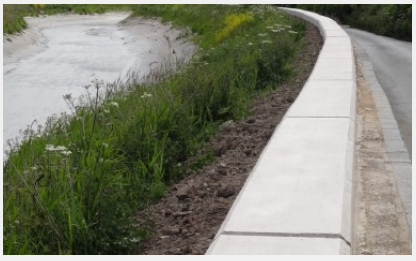
- Design service available
- Technical support
- Comprehensive trial assistance
- Latest fibre technology

Tunnel segments

Tunnel segments installed

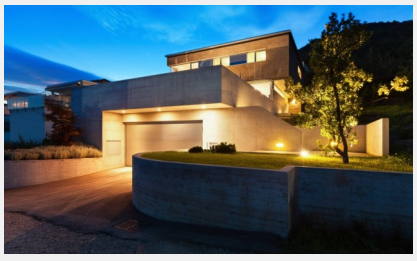


Retaining walls



River & sea defences

Car park elements



Wall units

Pipes and sectional elements

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