

User Guidelines
Durus® Floor

Macro Synthetic Fibre
Reinforced Concrete

Flooring System for
Internal Applications

Background

ADFIL Construction Fibres have developed a proven system of synthetic macro fibre reinforced concrete for use in internal areas, replacing the need for traditional steel mesh fabric.

DURUS FLOOR uses DURUS S400 Polypropylene Macro Fibre ready mixed into a designated grade of concrete to ensure consistent and reliable performance for the Customer every time.

Application Areas

DURUS FLOOR can be used in a wide variety of industrial and domestic applications:

- General industrial flooring.
- Workshop flooring.
- Agricultural buildings.
- Domestic floors.

The Key Features & Benefits

DURUS FLOOR will give the following benefits when compared to traditional steel mesh reinforcement construction:

- Ease of construction and reduced construction time.
- The risk of reinforcement being placed incorrectly is eliminated as it is contained within the delivered concrete, at the correct dosage to ensure the required performance.
- Elimination of significant Health & Safety hazards associated with the handling, cutting and fixing of steel mesh reinforcement.
- A significant reduction in embedded carbon (56%) when compared to steel mesh construction.
- Can provide an overall cost saving compared to traditional construction methods.

Installation

DURUS FLOOR can be placed using conventional techniques such as direct discharge, skip or pump. There are no specialist handling requirements.

To ensure the optimum performance of the end product, best practice compaction, finishing and curing techniques should be observed.

It is strongly recommended that a curing membrane be applied to the concrete surface immediately after finishing to control moisture and ensure the concrete reaches its required strength specification.



DURUS S400 Synthetic Macro Fibres are CE Marked and hold BBA Certification to enable use in the UK Construction Industry



DURUS FLOOR can be used in a wide variety of Internal Applications



Direct discharge into formwork will reduce construction time



A quality power float finish is easily achieved with the **DURUS FLOOR** system

Cost Savings

Using **DURUS FLOOR** can result in significant savings on the cost of traditional steel mesh reinforcement in addition to those associated with faster and easier installation.

The following table shows typical savings compared to the use of the common steel mesh types:

Solution	Traditional Steel Mesh Reinforcement Type			
	A142	A193	A252	A393
DURUS FLOOR 130	5%	7%	12%	20%
DURUS FLOOR 150	3%	5%	9%	14%
DURUS FLOOR 180	1%	3%	6%	10%

Table showing indicative cost savings compared to traditional mesh types

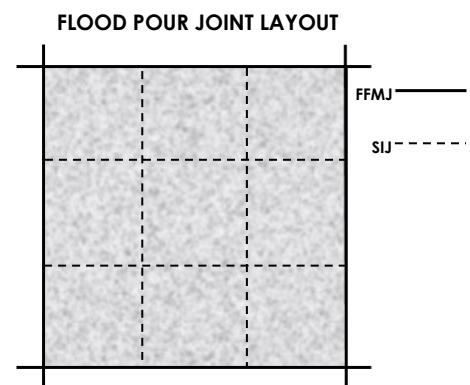
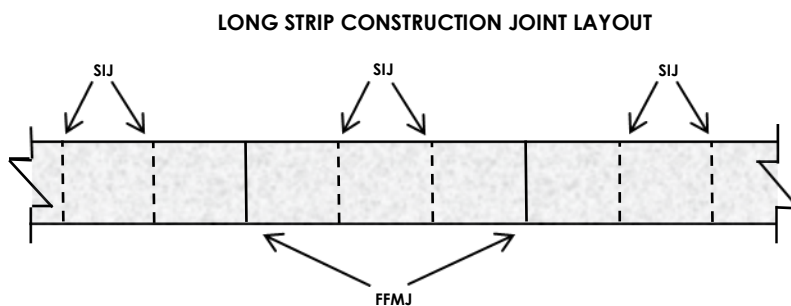
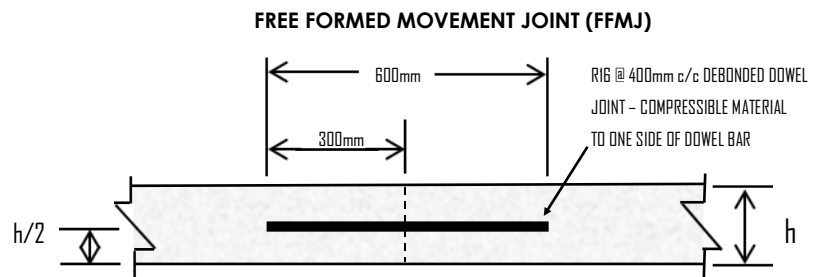
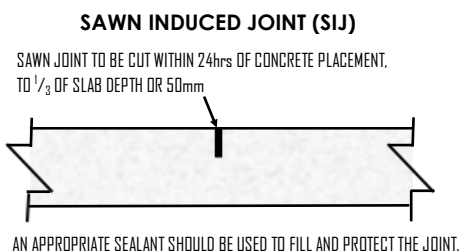
Technical Information

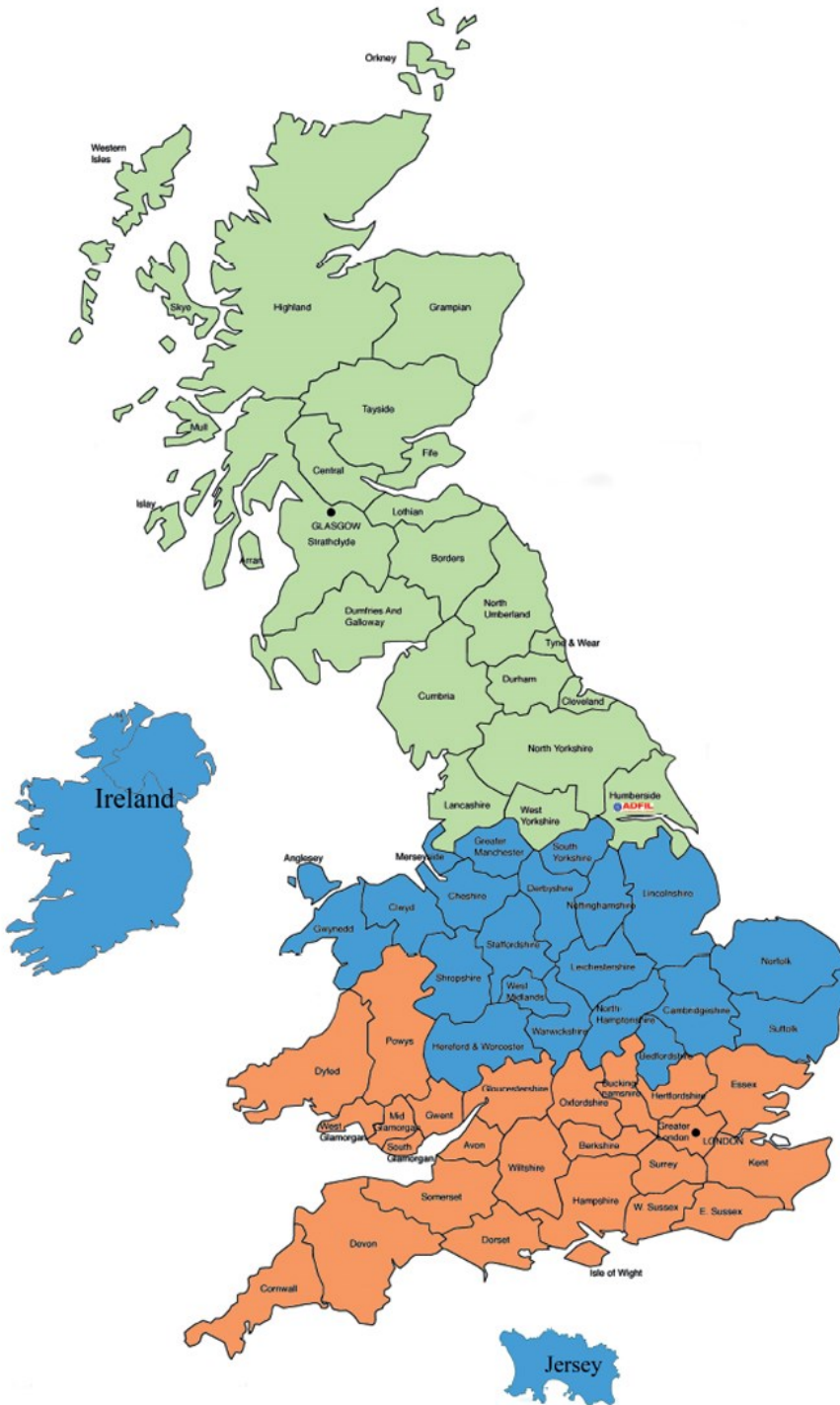
DURUS FLOOR can be specified and installed based upon the following load and construction recommendations, complying with the stated design assumptions noted below:

Solution	Slab Thickness (mm)	Maximum Point Load (T)	Maximum Forklift Capacity (T)	Maximum Wall Load (T)	Maximum Joint Spacing (m)
DURUS FLOOR 130	130	2	2	2	7
DURUS FLOOR 150	150	3	3	3	7
DURUS FLOOR 180	180	4	4	4	7

DESIGN ASSUMPTIONS: Minimum concrete grade C25/30
 Minimum sub-grade CBR = 5%
 Point load applied on base of minimum dimensions 125mm x 125mm

Recommended Joint Details





North

Central

South

 UK Office

UK Technical Sales Areas

Assistance

For any assistance with the concrete mix, compaction, or the finishing process, please contact one of the following people who can all provide technical support:

Thomas.hinch@bonar.com
 Northern M: +44 (0) 7785 616975

Richard.briers@bonar.com
 Central M: +44 (0) 7801 300966

Mike.boggust@bonar.com
 Southern M: +44 (0) 7824 015717

Mark.mitchell@bonar.com
 National M: +44 (0) 7801 595581

Customer service
 T: +44 (0) 1482 863777

Also visit our website www.adfil.co.uk to See all our guidance films.

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