

# Fibreglass Anti-Slip Flooring Products



**Preventing Trips, Slips and Falls in the Workplace**

**INDUSTRIAL**  
High performance composites

**dura**  
composites



# DURA TREAD Range



## Anti-slip Fibreglass Floor Grating

### Applications:

Industrial flooring  
Stairs  
Walkways  
Platforms  
Assembly lines  
Wash bays  
Work stations

### Benefits:

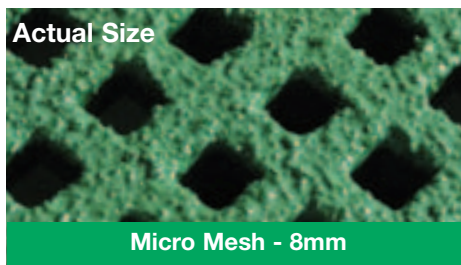
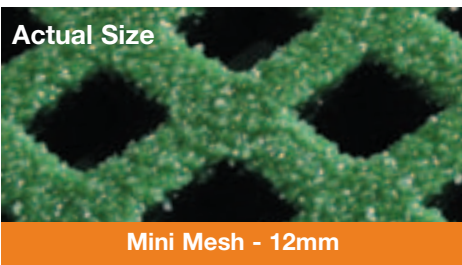
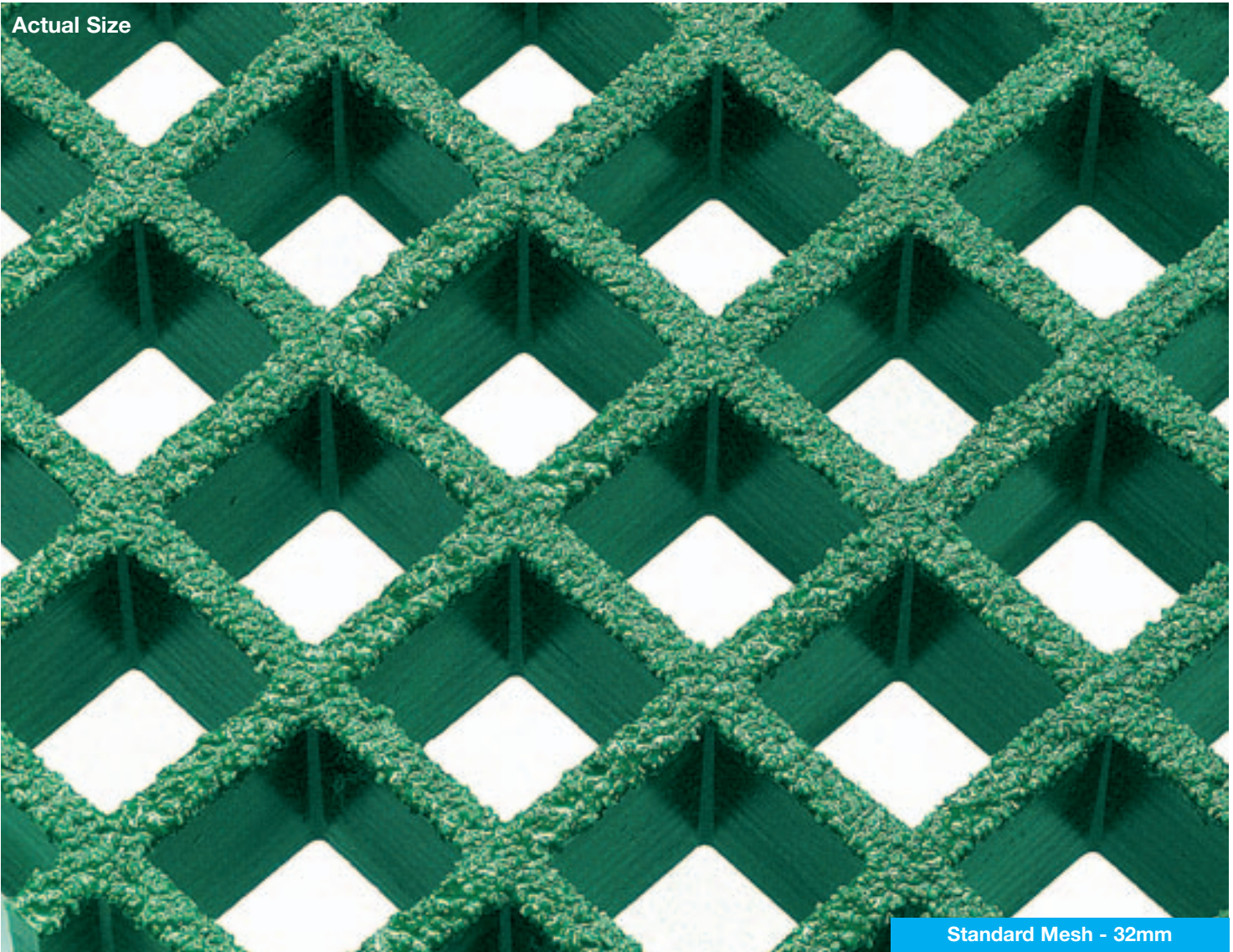
Anti-slip surface  
High strength  
Easy installation  
Lightweight  
Corrosion/fire resistant  
Impact resistant  
Zero maintenance

**Dura Tread has one of the highest degrees of slip-resistance ever measured for a walking surface**

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# DURA TREAD Standard Grating



		Panel Thickness (mm)							
		12.7	14	22	25	30	38	50	63
Open Mesh Size (mm)	Standard	✓						✓	
	Standard			✓	✓	✓			✓
	Mini		✓	✓		✓	✓		
Micro	Micro			✓	✓				

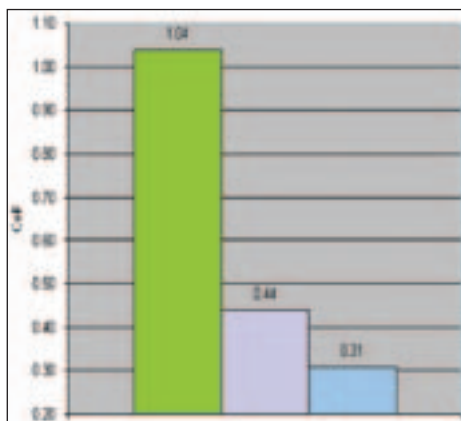
## Anti-Slip Surface

Angular Quartz is integrally bonded to the top surface, which produces an extremely long-lasting hardwearing surface. This gritted anti-slip texture has one of the highest degrees of slip resistance ever measured for a walking surface.

## British Standard Test Results

The BS4592 test was devised to test and assess the slip resistance of industrial type flooring intended for use in water and wet areas. A co-efficient of friction (CoF) is calculated by determining the mean angle of inclination that an operator can safely maintain when the flooring is subjected to a continuous stream of water.

## British Standard Slip Test Results



■ Dura Tread ■ Metal Grating ■ Chequer Plate

All grating is available in a range of panel sizes, mesh sizes and thicknesses.

**Mesh:** Smaller mesh sizes are suitable for small wheeled trolleys and wheelchairs and prevent small objects from passing through.

**Sizes:** Panel sizes are available up to 4000mm x 1500mm. See Price List for full details.

**Colours:** Standard colours, Green (RAL 6010) and Grey (RAL 7047), other RAL colours available on request.

# Previous Installations



Grating replaces steel construction wash bay walkway for Docklands Light Railway



Fibreglass Grating replaces corroded steel mesh covers



Fibreglass Grating walkway at salt works

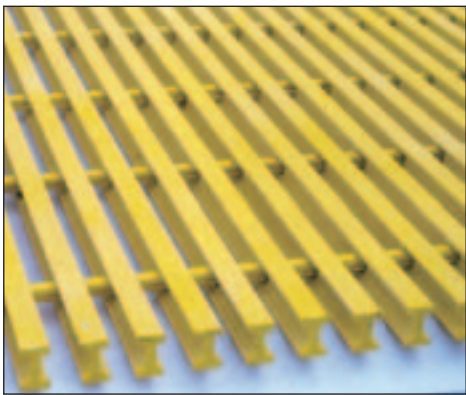


Fibreglass Grating platform below water covered stadium at Greece Olympics 2004



Fibreglass Grating anti-slip work area at car manufacturing plant

# DURA TREAD Pultruded Grating



**Applications:**

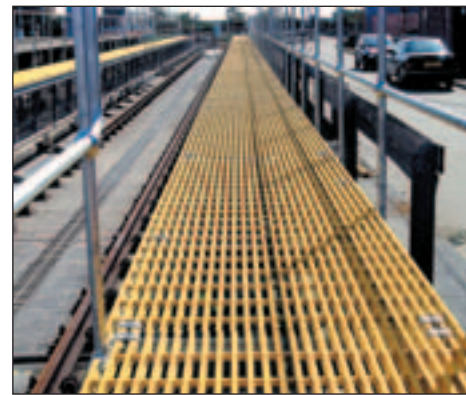
- High Load Bearing Areas
- Assembly Lines
- Continuous Walkways
- Bridges / Ramps

**Benefits:**

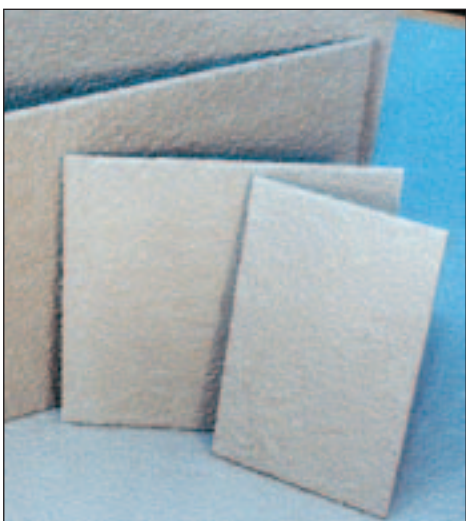
- Large uninterrupted Spans
- Huge Mechanical Strength
- Unlimited Panel Lengths
- Various Open Surface Areas

**Thickness :**

25mm - 100mm. Others on request - Various panel sizes available



# DURA TREAD Solid Fibreglass Plate



Fibreglass Plate has been designed to be installed over new or existing steel, timber, concrete or aluminium to provide an economical, safe solution to slippery walking surfaces.

**Benefits:**

- Fast Installation
- Economical
- Anti-Slip Surface
- Improved Appearance

**Sizes :**

- 4.8mm to 12mm thicknesses
- Up to 2400mm length
- Up to 1200mm width



## DURA TREAD Structural Stair Treads

Dura Tread structural stair treads have been designed for new and replacement staircase construction to provide a solid permanent footing. The proven gritted anti-slip surface has one of the highest degrees of slip resistance ever measured for a walking surface. Standard nosing is a highly visible yellow.

**Applications:**

- New Build Staircases
- Stairtread Replacement
- High Footfall Areas
- Heavy Industry

**Benefits:**

- Anti-Slip Surface
- Allows Drainage
- Fire / Chemical Resistant
- Maintenance Free

**Sizes :**

- 38mm thickness
- Length up to 3660mm
- Depth up to 270mm
- Tread sizes cut to suit



## DURA TREAD Stair Tread Covers

Dura Tread pre-formed anti-slip stair tread covers are a fast and convenient way to provide solid, slip-resistant footing for existing stairs. They can be installed over existing wood, concrete or metal steps by glueing, screwing or bolting into position for immediate use. Standard nosing for these covers is a highly visible yellow.

**Applications:**

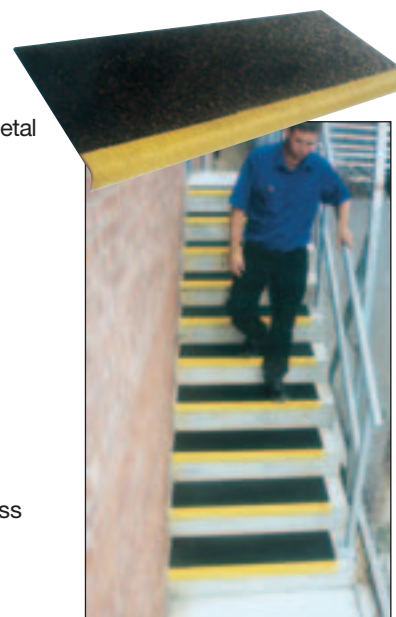
- Covers Existing Stairs
- Covers Wood, Concrete, Metal
- High Footfall Areas
- Commercial Use

**Benefits:**

- Anti-Slip Surface
- High Visibility Nosing
- Chemical Resistant
- Fast Installation

**Sizes:**

- 4.8mm and 6mm Thickness
- Length up to 3660mm
- Depth up to 345mm
- Tread sizes cut to suit



## DURA TREAD Ladders ■ Fixings & Accessories



**Applications:**

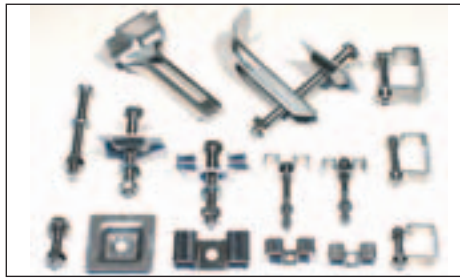
- Chemical Plants
- Water & Sewage Plants
- Maritime and Offshore
- Petro-chemical
- Power Stations

**Benefits:**

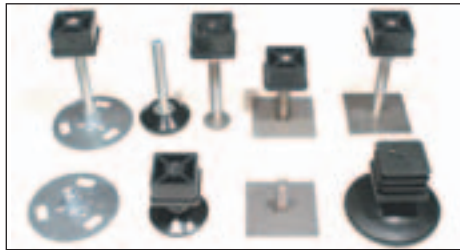
- Corrosion Resistant
- Maintenance Free
- Light Weight

**Sizes :**

- Available on request



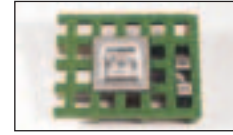
A full range of 316 grade S/S hold-down clips, clamps and panel-to-panel joiners are available.



Plastic and S/S pedestals are available to raise platforms and walkways from 7mm to 600mm.



Stainless Steel holding down clips for various applications.



Stainless Steel Square and 'M' holding down clips.

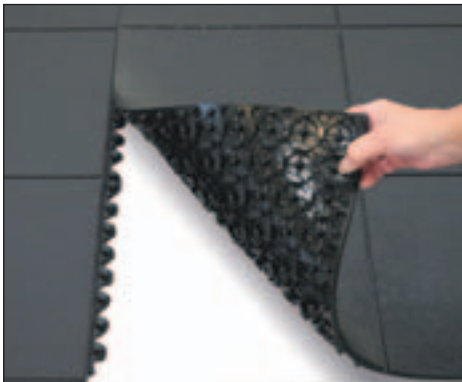


S/S dome headed surface mounted hold down fixings.



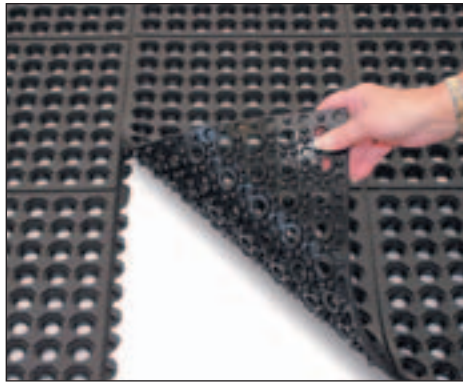
Self drilling, self tapping screws for fixing to metal & steel structures.

## RUBBER MATS Anti Fatigue ■



Solid top and high drainage rubber mats are manufactured from extremely durable rubber and are designed to provide the highest comfort factor and are supplied in interlocking sections for simple installation.

The rubber mats are 910mm x 910mm and 17mm thickness. The mats can be specified with extras such as bevelled edging strips to prevent tripping and providing wheeled access. The edging strips are supplied in high visibility yellow for increased safety.



**Solid Top Key Features:**

- High Comfort Factor
- Suits Small Wheeled Trolleys
- Protects Dropped Tools
- Embossed Surface for Traction
- Easy to Clean
- Non-Conductive

**High Drainage Key Features:**

- Allows Fluid Drainage
- Provides Dry Walking Surface
- Soft Surface Reduces Breakages
- Cylindrical Holes Prevent Dirt Build Up
- Reduces Bacterial Growth
- Non-Conductive



**Applications:**

- Factory Flooring
- Kitchen Areas
- Bars
- Workstations
- Leisure Areas
- Temporary Access

**Benefits:**

- Anti-Slip Surface
- Easy to Lay
- Hygienic
- Easy to Clean
- Anti Fatigue
- Impact Resistant
- High Visibility Edging
- Ramped Edges

**Specifications**

Dimensions: 910mm x 910mm x 17mm  
 Weight: 9.5 kg per mat



# DURA SLAB Range



## Fibreglass Structural Flooring

### Applications:

Trench Covers  
Industrial Flooring  
Work Platforms  
Tank Covers  
Service Duct Covers  
Bridge Decking

### Benefits:

Light weight / High strength  
Easy installation  
Anti-Slip Surface  
Corrosion/Fire resistant  
Impact resistant  
Zero maintenance

**For new or replacement trench covers, work platforms and industrial flooring**

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composites

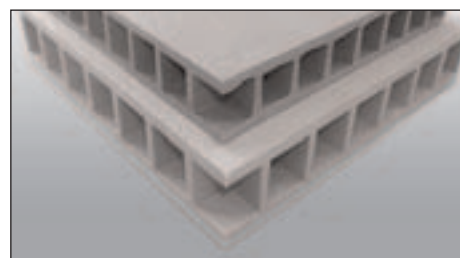


# DURA SLAB

## Hi Tech Construction

Dura Slab is a fibreglass structural flooring system manufactured using a unique construction technique that provides an incredible strength to weight ratio. Two high strength fibreglass solid plates are

bonded to each side of a fibreglass mesh core material producing a composite flooring structure that is stiff, strong, lightweight, non-corrosive with an anti-slip walking surface.



Section of Dura Slab showing construction

## New or Refurbishment Projects

Dura Slab is ideal for new constructions but is also well suited for refurbishment applications to replace old, heavy & cumbersome traditional flooring materials.

The characteristics of Dura Slab make it more favourable than using steel, timber or concrete systems due to its lower weight, anti-slip surface, ease of installation and absence of maintenance.



Removal of concrete covers prior to installations

## Health and Safety Compliant

Dura Slab is alone in providing such a comprehensive list of Health and Safety benefits. It has one of the highest degrees of slip resistance ever measured for a walking surface, especially in wet, oily and frosty conditions. It is a fraction of the weight of steel or concrete and can be supplied in 25kg or 50kg panel weights.

This allows a one or two man lift which complies with health and safety regulations. Routine inspections and repairs can be made easily by simply removing the appropriate panels. This obviates the need for expensive heavy lifting machinery in cases where access is limited.



Easy maintenance access

## Dura Slab BS EN124 Approved

Dura Slab is BS EN 124 approved. This European standard applies to gully tops and manhole tops for vehicular and pedestrian areas. A Dura Slab panel of 74mm thickness and 1280mm span was subjected to a load equivalent to two thirds of the Class B test load, 83.3kN.

This load cycle was repeated four further times and then the permanent set measured which must not exceed 1/100th of the span. The panel was then further loaded to the Class B test load, 125kN, which was maintained for 30 seconds and was found to meet the load requirements for a Class B 125 cover.



Dura Slab undergoing BS EN 124 testing

## Fixing types



- Nut and bolt
  - Fischer Rawlbolts
  - Coach screw
- (Anti-tamper available)

## Securing Methods



- Recessed collar
- Counter sunk
- Dome head bolt and washer

## Lifting Systems



- T-Bar lifting handles
  - Lifting Eyes
- (can suit 1,2 or 4 man lift)



# Previous Dura Slab installations

## Case Study 1 - Intervet UK Limited

“Some of the key advantages of using Dura Slab for our replacement service duct covers relate to better accessibility and its light weight construction. Dura Slab improves Health & Safety in several ways. Previous concrete covers required at least 2 men to lift them and as a result of their significant weight, there was a risk of injury. Now that Dura Slab has been installed, it means that one man can now lift a duct cover by himself and then work on the services without any need for additional man power. This saves money and time and also means that we don't have any problems carrying out maintenance.

The anti-slip surface is also important because the service duct covers are used as pedestrian walkways; the last thing we want is people slipping over due to a slippery surface in wet conditions. Finally, we found that Dura Slab was cheaper than the quote we received for bespoke concrete covers with the special lifting eyes to suit a 2/3 man lift”

Comment: Terry Boardman



## Case Study 2 - The Royal Botanic Garden Edinburgh

“When MEP were asked to replace all the pipe-work for the services, we took the opportunity to recommend an alternative duct cover to replace the original concrete material. The idea was to better fulfil key functional criteria: light weight for easy handling and easy access, high load bearing strength, anti-slip surface for all conditions”.

Comment: Jim Burnett



## Case Study 3 - National Grid

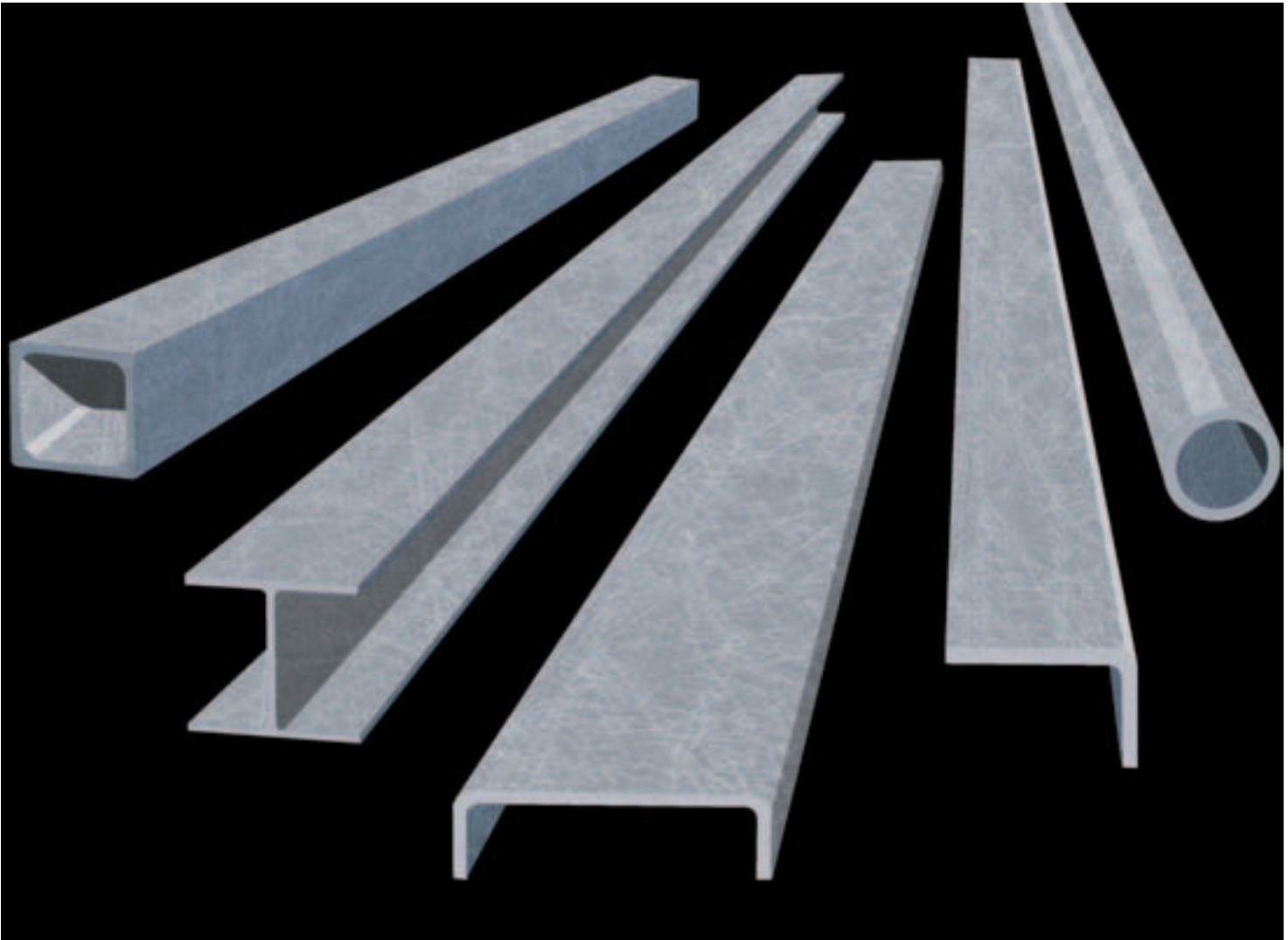
“The Dura Slab 5 ton trench cover was the only solution on the market that met all of our clients' requirements.

The anti-slip surface has already proven to be very effective. The installation period has coincided with very wet weather and I can report that there have been no incidents of site staff slipping or falling.”

Comment: Brendan Dowd



# DURA PROFILE Range



## Fibreglass Pultruded Sections

### Applications:

Structural Beams  
Stair Cases  
Cable Trays  
Hand Railing  
Flooring Supports  
Cooling Towers  
Ladders

### Benefits:

High Strength / Low Weight  
Non-Conductive  
Temperature Resistant  
Electromagnetic Transparency  
Simple Machining  
Chemical / Fire Resistance  
Zero Maintenance

**Heavy Duty, Maintenance-free,  
Corrosion Resistant Profiles for the  
construction Industry**

**dura**  
composites

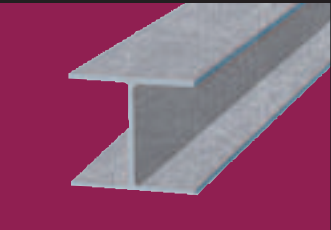



# DURA PROFILE Standard Range

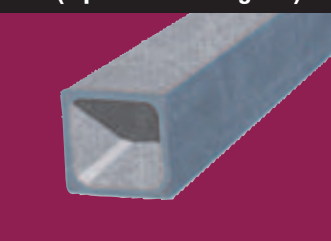
Dura Profiles are a practical proposition for more applications than ever before, thanks to the very wide range of standard profiles available. We carry one of the largest stock holdings of profile, including standard Angle, Channel, Beam and Box, also Tube, Bar and Rod sections.


We supply a cost effective solution for virtually every common application, with no tooling costs and minimal delivery lead time. All profiles can be produced in a vast number of dimensions and are available in five different resin systems depending on the application.

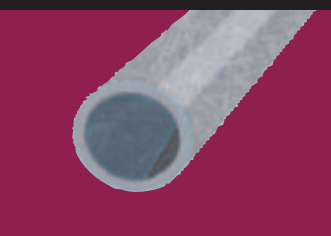
**Polyester** is suitable for most industrial applications. **Vinylester** provides additional corrosion resistance. **Epoxy** offers superior thermal stability. **Modar** improves fire and smoke performance. **Phenolic** also maximises fire performance as an alternative to Modar.

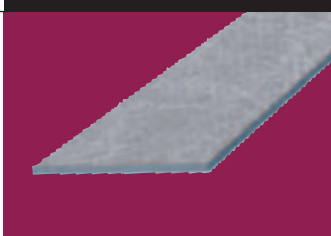
Size (mm)	Weight (kg/m)	I and H Beam
38 x 76 x 6.4	1.65	
50 x 102 x 6.4	2.21	
76 x 152 x 6.4	3.44	
76 x 152 x 9.5	5.05	
102 x 203 x 9.5	6.87	
102 x 203 x 12.7	8.98	
127 x 254 x 12.7	11.29	
152 x 305 x 12.7	13.77	

Size (mm)	Weight (kg/m)	Channel
76 x 38 x 6.4	1.53	
102 x 44 x 4.8	1.73	
127 x 35 x 6.4	1.65	
152 x 41 x 6.4	2.50	
203 x 56 x 9.5	5.08	
254 x 70 x 12.7	8.20	
610 x 76 x 6.4	8.36	
610 x 102 x 12.7	16.23	

Size (mm)	Weight (kg/m)	Box (square & rectangular)
25 x 25 x 3.0	0.48	
38 x 38 x 5.0	1.19	
38 x 38 x 6.4	1.46	
44 x 44 x 6.4	1.77	
50 x 50 x 3.0	1.00	
50 x 50 x 6.4	2.09	
51 x 51 x 3.2	1.10	
51 x 51 x 6.8	2.10	
64 x 64 x 6.4	2.67	
76 x 76 x 6.4	3.28	
102 x 102 x 6.4	4.59	

Size (mm)	Weight (kg/m)	Angle (equal & unequal)
25 x 25 x 3.0	0.25	
25 x 25 x 6.4	0.48	
38 x 38 x 6.4	0.75	
50 x 50 x 3.0	0.55	
50 x 50 x 6.0	1.08	
60 x 60 x 8.0	1.61	
75 x 75 x 10.0	2.40	
100 x 100 x 8.0	2.76	
102 x 102 x 9.5	3.44	
102 x 102 x 12.7	4.26	
152 x 152 x 12.7	6.91	

Size (mm)	Weight (kg/m)	Tube
17 x 13.2	0.28	
25 x 18.5	0.40	
25 x 21.8	0.40	
38 x 25.0	1.20	
38 x 31.6	1.20	
50 x 38.0	1.70	
50 x 43.6	1.70	
76 x 71.2	2.50	

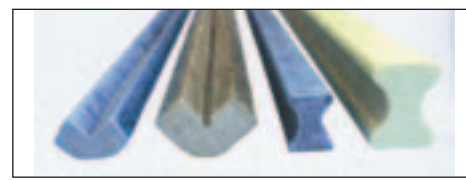
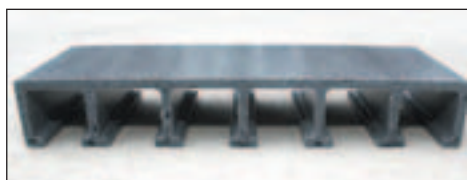
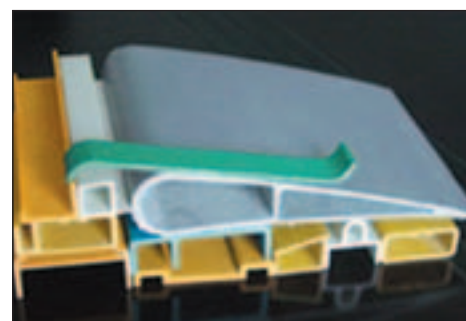
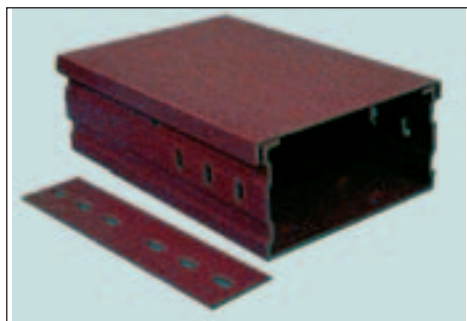
Size (mm)	Weight (kg/m)	Flat Bar
30 x 3.0	0.16	
80 x 3.0	0.43	
80 x 8.0	1.15	
150 x 3.0	1.13	
150 x 6.3	2.37	
305 x 4.0	3.06	
600 x 3.0	4.52	
600 x 12.0	18.08	

# DURA PROFILE Custom Range

The versatility and accuracy of the pultrusion process offer tremendous possibilities for complex shapes or special

properties. For extended production runs, it can be a highly cost-effective method of producing customised profiles, using

special dies to form the material directly into the finished shape, with no need for extra machining operations.



# DURA PROFILE Assembly Guide

Assembly methods used with conventional materials can also be used with Dura Profile. The most common connections are made by using a combination of mechanical fasteners with high quality adhesives.

## Mechanical Fasteners

### Bolting

This is the most common method of joining Dura Profile. Stainless steel nuts and bolts are used, with washers larger than usual to reduce local compressive stresses.

### Screwed Connections

Stainless steel self tapping screws can also be used successfully in many applications involving mechanical connections when high-strength fasteners are not required.

### Riveted Connections

Stainless steel and aluminium rivetting is a very effective method of joining Dura Profile. Pop-rivets are commonly used in conjunction with back washers to help distribute and minimise local stresses.

## Adhesives

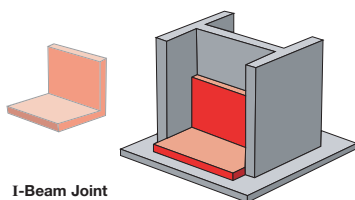
Adhesives distribute stress more evenly and are used successfully to join Dura Profile and for sealing joints and surfaces. Exceptional bonds can be obtained as long as the joint is designed to avoid excessive peeling stresses.

### Preparation

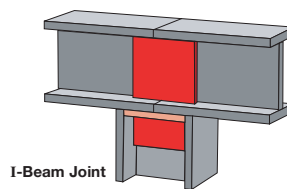
To achieve an optimum bond, the surfaces must be degreased with a suitable solvent. The bonding areas must be abraded until the surface gloss is removed, then cleaned of dust and degreased again.

### Assembly Methods

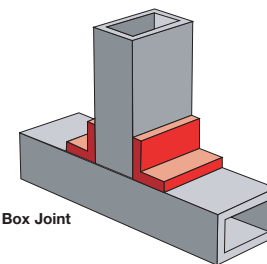
Almost all assembly methods used for wood, aluminium, steel or other materials can be adopted to assemble Dura Profile.



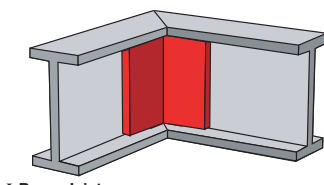
I-Beam Joint



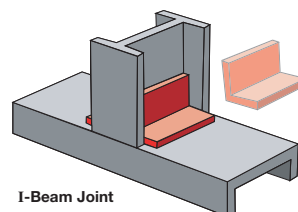
I-Beam Joint



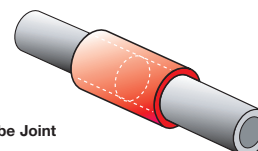
Box Joint



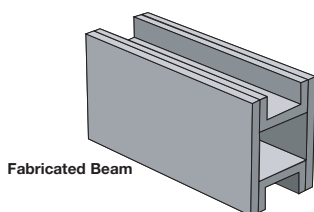
I-Beam Joint



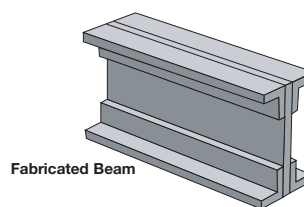
I-Beam Joint



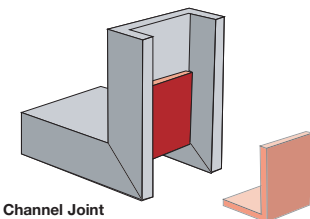
Tube Joint



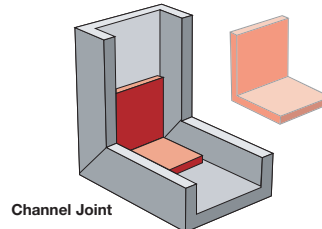
Fabricated Beam



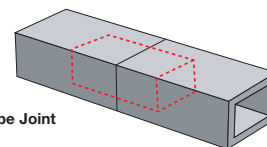
Fabricated Beam



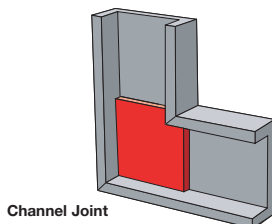
Channel Joint



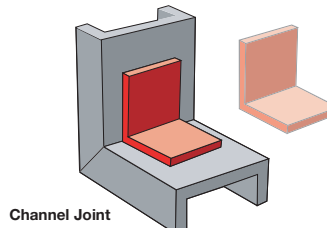
Channel Joint



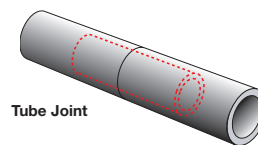
Tube Joint



Channel Joint



Channel Joint



Tube Joint

### Mechanical Properties

Tensile Strength	290 – 760 MPa
Tensile Modulus	18 – 38 GPa
Flexural Strength	250 – 750 MPa
Flexural Modulus	14 – 42 GPa
Compressive Strength	125 – 380 MPa
Impact Strength, Charpy	100 – 300 KJ/m <sup>2</sup>

### Physical Properties

Relative Density	1.6 – 2.1
Water Absorption	0.5%
Barcol Hardness	46 – 60
Specific Heat	1.5 KJ (kgK)
Thermal Conductivity	0.37 W/(mk)
Coefficient of Thermal Expansion	1.3 x 10 <sup>-5</sup> /K

### Electrical Properties

Electrical Strength at 23°C	7 – 12 MV/m
Comparative Tracking Index	480
Insulation Resistance	5 x 10 <sup>6</sup> Ω
Surface Resistivity	10 <sup>13.6</sup> Ω
Volume Resistivity	10 <sup>14.1</sup> Ωcm
Power factor at 1 MHz	0.0127
Permittivity at 1 MHz	3.99

## UAE

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 Fax: +971 4 3403906  
[www.duracomposites.ae](http://www.duracomposites.ae)  
[afi@emirates.net.ae](mailto:afi@emirates.net.ae)

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