

DURA SLAB PULTRUDED – TECHNICAL SPECIFICATIONS – January 2014

Definition

Glass-reinforced plastic (GRP) is a composite material made of a thermosetting plastic resin reinforced by fine fibres of glass along with the use of additives and is commonly referred to by the name of fibreglass.

Applications

GRP is an immensely versatile material which combines lightweight with inherent strength to provide a resilient finished product with a variety of surface textures and a virtually unlimited colour range available. By selecting the appropriate combination of fibreglass reinforcements, resins and processing techniques, the engineer can create a product or component to meet the most demanding of specifications.

Benefits

High strength, light weight, dimensional stability, corrosion/chemical/electrical resistance, low tooling/installation cost, long life. GRP products compete very favourably on a performance/life cycle cost basis versus traditional materials.

Raw Material

Two main components produce composite GRP: plastic resin and glass fibres. There are several types of resin systems that can be used depending on the application: Isophthalic, Orthophthalic, Vinylester, Epoxy, Modar and Phenolic. Isophthalic & Orthophthalic polyesters are the most widely used resin types and are suitable for most industrial applications. Isophthalic resin is used as standard unless otherwise specified.

| Typical Material Properties | Resin | Glassfibre |
|---|-------|------------|
| Density kg/m ³ (Specific Gravity) | 1200 | 2100 |
| Hardness (Barcol) | 38 | 45 |
| Tensile Strength Mpa | 55 | 207 |
| Modulus of Elasticity GPa / (Tensile Modulus) | 3.5 | 16 |
| Compressive Strength MPa | 140 | 18 |
| Flexural Strength MPa | 78 | 182 |
| Interlaminar Shear Strength MPa | Na | 9 |
| Water Absorption % | 0.15 | 0 |
| Voltage breakdown (k volts/mm) | - | 18 |
| Thermal Conductivity W/m°C | 0.21 | 0.29 |
| Max Operating Temp (deg. °C) | 140 | 200 |
| Specific Heat (kJ/kg °C) | 2.3 | na |



Product

Pultruded through a die, **Dura Slab** exhibits an incredible strength to weight ratio producing a composite flooring structure that is Rigid, strong, light-weight, non-corrosive, durable and maintenance free with an anti-slip surface.

Dura Slab Pultruded Light



Dura Slab Pultruded



Dura Composites Ltd
Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom
Tel: +44 (0)1255 423601
Fax: +44 (0)1255 435426
info@dura.composites.com
www.dura.composites.com

Industrial Marine Landscaping Architectural

Dura Composites Limited Registered at the address left
Registered in England. Reg No. 3266015. VAT Reg No. 688 5419 77

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| DURA SLAB - PULTRUDED | | | | | |
|------------------------------|------------------------|--------------|-----------------------|----------------------------------|--------------------------|
| Panel Size (mm) | | | Open Mesh Size | Weight (Kg/m²) | Panel Weight (Kg) |
| Thickness | Standard Length | Width | | | |
| Type 40 Light | 3660 | 500 | SOLID TOP | 17.2 | 31.48 |
| Type 45 TOP | 3660 | 699 | TOP GRIT | 25 | 45.75 |
| Type 45 BOTTOM | 3660 | 699 | BOTTOM GRIT | | 63.96 |
| Type 50 Light | 3660 | 500 | SOLID TOP | 24 | 61.40 |
| Type 50 TOP | 3660 | 475 | TOP GRIT | 36.44 | 66.69 |
| Type 50 BOTTOM | 3660 | 475 | BOTTOM GRIT | | 63.35 |
| Type 100 TOP | 3660 | 600 | TOP GRIT | 92.17 | 160.24 |
| Type 100 BOTTOM | 3660 | 600 | BOTTOM GRIT | | 202.41 |

Load and Deflection Specification

Load bearing capacity and panel deflection depend on panel thickness and unsupported span. Bespoke size options are available upon request.

| Ultimate Failure Loads (kN) | | | | | | | | | | | | |
|------------------------------------|--------------|---------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Product | Width | Kg/sqm | Load Type | 500 (mm) | 600 (mm) | 750 (mm) | 1000 (mm) | 1200 (mm) | 1500 (mm) | 2000 (mm) | 2500 (mm) | 3000 (mm) |
| Type 40 Light | 500mm | 17.2 | Point | 59 | 49 | 35 | 30 | 28 | 25 | 21 | 12 | 10 |
| Type 45 | 700mm | 23.6 | Point | 70 | 70 | 70 | 74 | 85 | 91 | 79 | 43 | 36 |
| Type 50 Light | 475mm | 43.7 | Point | 80 | 72 | 51 | 67 | 62 | 58 | 41 | 15 | 13 |
| Type 50 | 600mm | 62.0 | Point | 339 | 297 | 220 | 170 | 145 | 91 | 68 | 54 | 45 |
| Type 100 | 600mm | 82.4 | Point | 405 | 405 | 380 | 319 | 330 | 311 | 295 | 240 | 200 |

| BS EN 124 Classification met by span | | | | | | | | | | | | |
|---|--------------|---------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Product | Width | Kg/sqm | Load Type | 500 (mm) | 600 (mm) | 750 (mm) | 1000 (mm) | 1200 (mm) | 1500 (mm) | 2000 (mm) | 2500 (mm) | 3000 (mm) |
| Type 40 Light | 500mm | 17.2 | Point | A | A | A | A | A | A | A | na | na |
| Type 45 | 700mm | 23.6 | Point | A | A | A | A | A | A | A | A | A |
| Type 50 Light | 475mm | 43.7 | Point | A | A | A | A | A | A | A | A | A |
| Type 50 | 600mm | 62.0 | Point | B | B | B | B | B | A | A | A | A |
| Type 100 | 600mm | 82.4 | Point | D | D | C | C | C | C | C | B | B |

Dura Composites Ltd
Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom
Tel: +44 (0)1255 423601
Fax: +44 (0)1255 435426
info@duracomposites.com
www.duracomposites.com

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Registered in England. Reg No. 3266015. VAT Reg No. 688 5419 77

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| BS EN 124 Classifications | | | |
|----------------------------------|-------------|---------------------|----------------------|
| Classification | Code | Working Load | Ultimate Load |
| Class A | A15 | 5kN | 15kN |
| Class B | B125 | 50kN | 125kN |
| Class C | C250 | 65kN | 250kN |
| Class D | D400 | 108kN | 400kN |

| UDL Deflection Loads (kN) | | | | | | | | | | | |
|--|--------------------------|------|------|------|------|------|------|------|------|------|------|
| Type 40 Light | Single Span Panel | | | | | | | | | | |
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 | 18.3 | 20.0 |
| Allowable load to achieve L/150 (kN/m ²) | 141 | 70.3 | 22.8 | 11.9 | 6.9 | 4.4 | 3.0 | 2.1 | 1.5 | 1.1 | 0.9 |
| L/200 Deflection (mm) | 1.5 | 3.0 | 5.0 | 6.3 | 7.5 | 8.8 | 10.0 | 11.3 | 12.5 | 13.8 | 15.0 |
| Allowable load to achieve L/200 (kN/m ²) | 141 | 70.3 | 17.1 | 8.9 | 5.2 | 3.3 | 2.2 | 1.6 | 1.1 | 0.9 | 0.7 |
| L/300 Deflection (mm) | 1 | 2.0 | 3.3 | 4.2 | 5.0 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10.0 |
| Allowable load to achieve L/300 (kN/m ²) | 141 | 48.9 | 11.4 | 5.9 | 3.5 | 2.2 | 1.5 | 1.0 | 0.8 | 0.6 | 0.4 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5.0 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 141 | 36.7 | 8.6 | 4.5 | 2.6 | 1.6 | 1.1 | 0.8 | 0.6 | 0.4 | 0.3 |

| Two Spans Continuous Panel | | | | | | | | | | | |
|--|-----|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4 | 6.7 | 8.3 | 10 | 11.7 | 13.3 | 15 | 16.7 | 18.3 | 20 |
| Allowable load to achieve L/150 (kN/m ²) | 113 | 56 | 33.8 | 27 | 16.3 | 10.4 | 7 | 5 | 3.6 | 2.7 | 2.1 |
| L/200 Deflection (mm) | 1.5 | 3 | 5 | 6.3 | 7.5 | 8.8 | 10 | 11.3 | 12.5 | 13.8 | 15 |
| Allowable load to achieve L/200 (kN/m ²) | 113 | 56 | 33.8 | 20.6 | 12.2 | 7.8 | 5.3 | 3.7 | 2.7 | 2 | 1.6 |
| L/300 Deflection (mm) | 1 | 2 | 3.3 | 4.2 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10 |
| Allowable load to achieve L/300 (kN/m ²) | 113 | 56 | 25.9 | 13.8 | 8.1 | 5.2 | 3.5 | 2.5 | 1.8 | 1.4 | 1.1 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 113 | 56 | 19.4 | 10.3 | 6.1 | 3.9 | 2.6 | 1.9 | 1.4 | 1 | 0.8 |

| Single Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|--|-----|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 141 | 70 | 42.2 | 33.8 | 23.7 | 17.4 | 13.4 | 10.6 | 8.5 | 7.1 | 5.9 |

| Two Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|---|-----|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 113 | 56 | 33.8 | 27 | 22.5 | 17.4 | 13.4 | 10.6 | 8.5 | 7.1 | 5.9 |

| Type 45 | Single Span Panel | | | | | | | | | | |
|--|--------------------------|-------|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 | 18.3 | 20.0 |
| Allowable load to achieve L/150 (kN/m ²) | 214.3 | 107.1 | 51.2 | 26.9 | 15.8 | 10.0 | 6.8 | 4.8 | 3.5 | 2.6 | 2.0 |
| L/200 Deflection (mm) | 1.5 | 3.0 | 5.0 | 6.3 | 7.5 | 8.8 | 10.0 | 11.3 | 12.5 | 13.8 | 15.0 |
| Allowable load to achieve L/200 (kN/m ²) | 214.3 | 107.1 | 38.4 | 20.2 | 11.9 | 7.5 | 5.1 | 3.6 | 2.6 | 2.0 | 1.5 |
| L/300 Deflection (mm) | 1 | 2.0 | 3.3 | 4.2 | 5.0 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10.0 |
| Allowable load to achieve L/300 (kN/m ²) | 214.3 | 104.7 | 25.6 | 13.5 | 7.9 | 5.0 | 3.4 | 2.4 | 1.7 | 1.3 | 1.0 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5.0 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 214.3 | 78.5 | 19.2 | 10.1 | 5.9 | 3.8 | 2.5 | 1.8 | 1.3 | 1.0 | 0.8 |

| Two Spans Continuous Panel | | | | | | | | | | | |
|--|-------|------|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4 | 6.7 | 8.3 | 10 | 11.7 | 13.3 | 15 | 16.7 | 18.3 | 20 |
| Allowable load to achieve L/150 (kN/m ²) | 171.4 | 85.7 | 51.4 | 41.1 | 34.3 | 23.4 | 15.9 | 11.3 | 8.3 | 6.2 | 4.8 |
| L/200 Deflection (mm) | 1.5 | 3 | 5 | 6.3 | 7.5 | 8.8 | 10 | 11.3 | 12.5 | 13.8 | 15 |
| Allowable load to achieve L/200 (kN/m ²) | 171.4 | 85.7 | 51.4 | 41.1 | 27.3 | 17.5 | 11.9 | 8.4 | 6.2 | 4.7 | 3.6 |
| L/300 Deflection (mm) | 1 | 2 | 3.3 | 4.2 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10 |
| Allowable load to achieve L/300 (kN/m ²) | 171.4 | 85.7 | 51.4 | 30.4 | 18.2 | 11.7 | 7.9 | 5.6 | 4.1 | 3.1 | 2.4 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 171.4 | 85.7 | 41.9 | 22.8 | 13.6 | 8.8 | 6 | 4.2 | 3.1 | 2.3 | 1.8 |

| Single Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|--|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 214.3 | 107 | 64.3 | 51.4 | 42.9 | 36.7 | 32.1 | 28.3 | 22.9 | 18.9 | 15.9 |

| Two Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|---|-------|------|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 171.4 | 85.7 | 51.4 | 41.1 | 34.3 | 29.4 | 25.7 | 22.9 | 20.6 | 18.7 | 15.9 |

| Type 50 Light | Single Span Panel | | | | | | | | | | |
|--|--------------------------|-------|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 | 18.3 | 20.0 |
| Allowable load to achieve L/150 (kN/m ²) | 266.7 | 133.3 | 45.4 | 23.7 | 13.8 | 8.8 | 5.9 | 4.2 | 3.0 | 2.3 | 1.8 |
| L/200 Deflection (mm) | 1.5 | 3.0 | 5.0 | 6.3 | 7.5 | 8.8 | 10.0 | 11.3 | 12.5 | 13.8 | 15.0 |
| Allowable load to achieve L/200 (kN/m ²) | 266.7 | 133.3 | 34.1 | 17.8 | 10.4 | 6.6 | 4.4 | 3.1 | 2.3 | 1.7 | 1.3 |
| L/300 Deflection (mm) | 1 | 2.0 | 3.3 | 4.2 | 5.0 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10.0 |
| Allowable load to achieve L/300 (kN/m ²) | 266.7 | 96.8 | 22.7 | 11.8 | 6.9 | 4.4 | 2.9 | 2.1 | 1.5 | 1.1 | 0.9 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5.0 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 266.7 | 72.6 | 17.0 | 8.9 | 5.2 | 3.3 | 2.2 | 1.6 | 1.1 | 0.9 | 0.7 |

| Two Spans Continuous Panel | | | | | | | | | | | |
|--|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4 | 6.7 | 8.3 | 10 | 11.7 | 13.3 | 15 | 16.7 | 18.3 | 20 |
| Allowable load to achieve L/150 (kN/m ²) | 213.3 | 107 | 64 | 51.2 | 32.3 | 20.7 | 14 | 9.9 | 7.2 | 5.4 | 4.2 |
| L/200 Deflection (mm) | 1.5 | 3 | 5 | 6.3 | 7.5 | 8.8 | 10 | 11.3 | 12.5 | 13.8 | 15 |
| Allowable load to achieve L/200 (kN/m ²) | 213.3 | 107 | 64 | 41 | 24.3 | 15.5 | 10.5 | 7.4 | 5.4 | 4.1 | 3.2 |
| L/300 Deflection (mm) | 1 | 2 | 3.3 | 4.2 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10 |
| Allowable load to achieve L/300 (kN/m ²) | 213.3 | 107 | 51.2 | 27.3 | 16.2 | 10.3 | 7 | 4.9 | 3.6 | 2.7 | 2.1 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 213.3 | 107 | 38.4 | 20.5 | 12.1 | 7.7 | 5.2 | 3.7 | 2.7 | 2 | 1.6 |

| Single Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|--|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 266.7 | 133 | 80 | 59.1 | 41 | 30.1 | 23.1 | 18.2 | 14.8 | 12.2 | 10.3 |

| Two Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|---|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 213.3 | 107 | 64 | 51.2 | 41 | 30.1 | 23.1 | 18.2 | 14.8 | 12.2 | 10.3 |

| Type 50 | Single Span Panel | | | | | | | | | | |
|--|--------------------------|-------|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 | 18.3 | 20.0 |
| Allowable load to achieve L/150 (kN/m ²) | 413.1 | 206.6 | 81.7 | 42.8 | 25.1 | 15.9 | 10.7 | 7.6 | 5.5 | 4.2 | 3.2 |
| L/200 Deflection (mm) | 1.5 | 3.0 | 5.0 | 6.3 | 7.5 | 8.8 | 10.0 | 11.3 | 12.5 | 13.8 | 15.0 |
| Allowable load to achieve L/200 (kN/m ²) | 413.1 | 206.6 | 61.2 | 32.1 | 18.8 | 11.9 | 8.0 | 5.7 | 4.1 | 3.1 | 2.4 |
| L/300 Deflection (mm) | 1 | 2.0 | 3.3 | 4.2 | 5.0 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10.0 |
| Allowable load to achieve L/300 (kN/m ²) | 413.1 | 169.7 | 40.8 | 21.4 | 12.5 | 8.0 | 5.4 | 3.8 | 2.8 | 2.1 | 1.6 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5.0 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 413.1 | 127.3 | 30.6 | 16.0 | 9.4 | 6.0 | 4.0 | 2.8 | 2.1 | 1.6 | 1.2 |

| Two Spans Continuous Panel | | | | | | | | | | | |
|--|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | 2 | 4 | 6.7 | 8.3 | 10 | 11.7 | 13.3 | 15 | 16.7 | 18.3 | 20 |
| Allowable load to achieve L/150 (kN/m ²) | 413.1 | 207 | 81.7 | 42.8 | 25.1 | 15.9 | 10.7 | 7.6 | 5.5 | 4.2 | 3.2 |
| L/200 Deflection (mm) | 1.5 | 3 | 5 | 6.3 | 7.5 | 8.8 | 10 | 11.3 | 12.5 | 13.8 | 15 |
| Allowable load to achieve L/200 (kN/m ²) | 413.1 | 207 | 61.2 | 32.1 | 18.8 | 11.9 | 8 | 5.7 | 4.1 | 3.1 | 2.4 |
| L/300 Deflection (mm) | 1 | 2 | 3.3 | 4.2 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10 |
| Allowable load to achieve L/300 (kN/m ²) | 413.1 | 170 | 40.8 | 21.4 | 12.5 | 8 | 5.4 | 3.8 | 2.8 | 2.1 | 1.6 |
| L/400 Deflection (mm) | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | 413.1 | 127 | 30.6 | 16 | 9.4 | 6 | 4 | 2.8 | 2.1 | 1.6 | 1.2 |

| Single Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|--|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 413.1 | 207 | 124 | 99.1 | 82.6 | 67.7 | 51.8 | 40.9 | 33.2 | 27.4 | 23 |

| Two Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | |
|---|-------|-----|------|------|------|------|------|------|------|------|------|
| Span (mm) | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | 330.5 | 165 | 99.1 | 79.3 | 66.1 | 56.7 | 49.6 | 40.9 | 33.2 | 27.4 | 23 |

| Type 100 | | Single Span Panel | | | | | | | | | | |
|--|--|--------------------------|-------|-------|-------|-------|-------|------|------|------|------|------|
| Span (mm) | | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | | 2 | 4.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 | 18.3 | 20.0 |
| Allowable load to achieve L/150 (kN/m ²) | | 1021.5 | 510.7 | 306.4 | 245.2 | 204.3 | 137.7 | 93.9 | 66.8 | 49.2 | 37.2 | 28.8 |
| L/200 Deflection (mm) | | 1.5 | 3.0 | 5.0 | 6.3 | 7.5 | 8.8 | 10.0 | 11.3 | 12.5 | 13.8 | 15.0 |
| Allowable load to achieve L/200 (kN/m ²) | | 1021.5 | 510.7 | 306.4 | 245.2 | 159.6 | 103.3 | 70.5 | 50.1 | 36.9 | 27.9 | 21.6 |
| L/300 Deflection (mm) | | 1 | 2.0 | 3.3 | 4.2 | 5.0 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10.0 |
| Allowable load to achieve L/300 (kN/m ²) | | 1021.5 | 510.7 | 306.4 | 176.0 | 106.4 | 68.9 | 47.0 | 33.4 | 24.6 | 18.6 | 14.4 |
| L/400 Deflection (mm) | | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5.0 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | | 1021.5 | 510.7 | 239.1 | 132.0 | 79.8 | 51.6 | 35.2 | 25.1 | 18.4 | 13.9 | 10.8 |
| Two Spans Continuous Panel | | | | | | | | | | | | |
| Span (mm) | | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| L/150 Deflection (mm) | | 2 | 4 | 6.7 | 8.3 | 10 | 11.7 | 13.3 | 15 | 16.7 | 18.3 | 20 |
| Allowable load to achieve L/150 (kN/m ²) | | 817.2 | 409 | 245 | 196 | 163 | 140 | 123 | 109 | 98.1 | 85.7 | 66.8 |
| L/200 Deflection (mm) | | 1.5 | 3 | 5 | 6.3 | 7.5 | 8.8 | 10 | 11.3 | 12.5 | 13.8 | 15 |
| Allowable load to achieve L/200 (kN/m ²) | | 817.2 | 409 | 245 | 196 | 163 | 140 | 123 | 109 | 84.3 | 64.3 | 50.1 |
| L/300 Deflection (mm) | | 1 | 2 | 3.3 | 4.2 | 5 | 5.8 | 6.7 | 7.5 | 8.3 | 9.2 | 10 |
| Allowable load to achieve L/300 (kN/m ²) | | 817.2 | 409 | 245 | 196 | 163 | 140 | 105 | 75.5 | 56.2 | 42.9 | 33.4 |
| L/400 Deflection (mm) | | 0.8 | 1.5 | 2.5 | 3.1 | 3.8 | 4.4 | 5 | 5.6 | 6.3 | 6.9 | 7.5 |
| Allowable load to achieve L/400 (kN/m ²) | | 817.2 | 409 | 245 | 196 | 163 | 112 | 78.4 | 56.6 | 42.1 | 32.1 | 25.1 |
| Single Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | | |
| Span (mm) | | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | | 1021.5 | 511 | 306 | 245 | 204 | 175 | 153 | 136 | 123 | 111 | 102 |
| Two Span Panel - Maximum Allowable Working Load Based On Strength Only | | | | | | | | | | | | |
| Span (mm) | | 300 | 600 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 |
| Allowable Load (kN/m ²) | | 817.2 | 409 | 245 | 196 | 163 | 140 | 123 | 109 | 98.1 | 89.1 | 81.7 |

All data is produced based on live testing carried out by Environmental Scientifics Group, which has been extrapolated by Optima Projects. Published Loads also account for:

Load Factor – 1.5

Material Factor - 2

Dura Composites Ltd
Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom
Tel: +44 (0)1255 423601
Fax: +44 (0)1255 435426
info@dura.composites.com
www.dura.composites.com

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Product Specifications

| Characteristics | Unit | Reference |
|--|--|-----------------------|
| Tensile Strength | 220Mpa | ASTM D1037-93 |
| Modulus of Elasticity | 21Gpa | ASTM D1037-93 |
| Flexural Strength | 280Mpa | ASTM D1037-93 |
| Compressive Strength | 145Mpa | ASTM D1037-93 |
| Voltage breakdown | 18K volts/mm | ASTM D149 |
| Density kg/m ³ (Specific Gravity) | 2100 | ISO 9001 |
| Thermal Expansion Factor | 13 x 10 ⁻⁶ mm/mm °C | ISO 9001 |
| Water Absorption rate | 0.45 x 24 hrs | ASTM D570 |
| Operating Temperature | -100 °C to +200 °C | ISO 9001 |
| Flammability resistance | Class 2, Option of Class 2, 1 or Class 0 | BS476 Part 7 & 6 |
| Frost resistance | No Effect | DD CEN/TS 772-22:2006 |
| Weatherability | Pass | MOAT 22 |
| Anti-Slip Surface | 1.04 CoF (with anti-slip finish only) | BS 4592-0 |
| UV Weather | 5000hrs | ISO 4892-2 Xenon Arc |

Testing Standards

Fire Certificate

- Standard Iso Resin - BS 476 Part 7 Class 2.
Special Order Iso Resin - BS 476 Part 7 Class 1.
Special Order Phenolic Resin - BS 476 Part 6 & 7 Class 0.

Slip Certificate

- BS 7976-2 Pendulum Test – Dry Value – 72, Wet Value 66.
BS 4592-0 Ramp Test – Wet 1.04 Cof.

Load Certificate

- BS EN 124 – Class A15, B125, C250, D400.

UV Certificate

- UV Weather ISO 4892-2 Xenon Arc 5000hrs

Colour and Surface Finish

The product can be made in any RAL Colour. (Colour range is more limited for Class 1 & 0 fire rated product). Supplied in smooth or gritted (Silicone Carbide), different grit sizes available.

Chemical Resistance

DuraSlab standard product is resistant against wide a range of chemicals across wide temperature spectrum. **DuraSlab** can be made of different resin systems to achieve specific chemical resistant properties. Refer to chemical resistance charts.

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Essex, CO15 4LP
United Kingdom

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info@dura composites.com
www.dura composites.com

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| RESIN TYPE | Vinylester | | Isophthalic | | Orthophthalic | |
|----------------------|------------|----------------------|-------------|----------------------|---------------|----------------------|
| | %Conc. | Max. Oper. Temp.F/C. | %Conc. | Max. Oper. Temp.F/C. | %Conc. | Max. Oper. Temp.F/C. |
| Acetic Acid | 50 | 180/82 | 50 | 125/52 | 25 | N/R |
| Aluminum Hydroxide | 100 | 180/82 | 100 | 160/71 | ALL | - |
| Ammonium Chloride | ALL | 210/99 | ALL | 170/77 | ALL | - |
| Ammonium Bicarbonate | 50 | 160/70 | 15 | 125/52 | ALL | - |
| Ammonium Hydroxide | 28 | 100/38 | 28 | N/R | ALL | N/R |
| Ammonium Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | - |
| Benzene | ALL | N/R | ALL | N/R | ALL | N/R |
| Benzoic Acid | SAT | 210/99 | SAT | 150/66 | ALL | 77/25 |
| Borax | SAT | 210/99 | SAT | 170/77 | ALL | - |
| Calcium Carbonate | ALL | 180/82 | ALL | 170/77 | ALL | - |
| Calcium Nitrate | ALL | 210/99 | ALL | 180/82 | ALL | - |
| Carbon Tetrachloride | 100 | 150/65 | 100 | N/R | 100 | N/R |
| Chlorine Dry Gas | - | 210/99 | - | 140/60 | - | N/R |
| Chlorine Water | SAT | 200/93 | SAT | 80/27 | SAT | N/R |
| Chromic Acid | 10 | 150/65 | 5 | 70/21 | 5 | N/R |
| Citric Acid | ALL | 210/99 | ALL | 170/77 | ALL | 77/25 |
| Copper Chloride | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Copper Cyanide | ALL | 210/99 | ALL | 170/77 | ALL | 77/25 |
| Copper Nitrate | ALL | 210/99 | ALL | 170/77 | ALL | - |
| Ethanol | 50 | 100/38 | 50 | 75/24 | 10 | 77/25 |
| Ethylene Glycol | 100 | 200/93 | 100 | 90/32 | 100 | 104/40 |
| Ferrous Chloride | ALL | 210/99 | ALL | 170/77 | ALL | 86/30 |
| Formaldehyde | ALL | 150/65 | 50 | 75/24 | 25 | - |
| Gasoline | 100 | 180/82 | 100 | 80/27 | 100 | 77/25 |
| Glucose | 100 | 210/99 | 100 | 170/77 | ALL | - |
| Glycerin | 100 | 210/99 | 100 | 150/66 | 100 | - |
| Hydrobromic Acid | 50 | 150/65 | 50 | 120/49 | 18 | - |
| Hydrochloric Acid | 37 | 150/65 | 37 | 75/24 | 10 | 86/30 |
| Hydrogen Peroxide | 30 | 150/65 | 5 | 100/38 | 5 | N/R |
| Lactic Acid | ALL | 210/99 | ALL | 170/77 | ALL | 77/25 |
| Lithium Chloride | SAT | 210/99 | SAT | 150/66 | ALL | - |
| Magnesium Chloride | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Magnesium Nitrate | ALL | 210/99 | ALL | 140/60 | ALL | 86/30 |
| Magnesium Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Mercuric Chloride | 100 | 210/99 | 100 | 150/66 | 100 | 104/40 |
| Mercurous Chloride | ALL | 210/99 | ALL | 140/60 | ALL | 104/40 |
| Nickel Chloride | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |

Dura Composites Ltd

Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom

Tel: +44 (0)1255 423601
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info@duracomposites.com
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| | | | | | | |
|----------------------|-------------------|----------------------------|--------------------|----------------------------|----------------------|----------------------------|
| Nickel Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| RESIN TYPE | Vinylester | | Isophthalic | | Orthophthalic | |
| Environment | %Conc. | Max.Oper. Temp.F/C. | %Conc. | Max.Oper. Temp.F/C. | %Conc. | Max.Oper. Temp.F/C. |
| Nitric Acid | 20 | 120/49 | 20 | 70/21 | 2 | N/R |
| Oxalic Acid | ALL | 210/99 | ALL | 75/24 | ALL | N/R |
| Perchloric Acid | 30 | 100/38 | 10 | N/R | 10 | N/R |
| Phosphoric Acid | 100 | 210/99 | 100 | 120/49 | 80 | N/R |
| Potass.Chloride | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Potassium Dichromate | ALL | 210/99 | ALL | 170/77 | ALL | 77/25 |
| Potassium Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Propylene Glycol | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Sodium Acetate | ALL | 210/99 | ALL | 160/71 | ALL | 104/40 |
| Sodium Bisulfate | ALL | 210/99 | ALL | 170/77 | ALL | - |
| Sodium Bromide | ALL | 210/99 | ALL | 170/77 | 5 | - |
| Sodium Cyanide | ALL | 210/99 | ALL | 170/77 | 5 | N/R |
| Sodium Hydroxide | 25 | 180/82 | N/R | N/R | 1 | N/R |
| Sodium Nitrate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Sodium Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Stannic Chloride | ALL | 210/99 | ALL | 160/71 | ALL | 104/40 |
| Sulfuric Acid | 75 | 100/38 | 25 | 75/24 | 10 | - |
| Tartaric Acid | ALL | 210/99 | ALL | 170/77 | ALL | - |
| Vinegar | 100 | 210/99 | 100 | 170/77 | ALL | - |
| Water Distilled | 100 | 180/82 | 100 | 170/77 | ALL | 86/30 |
| Zinc Nitrate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |
| Zinc Sulfate | ALL | 210/99 | ALL | 170/77 | ALL | 104/40 |

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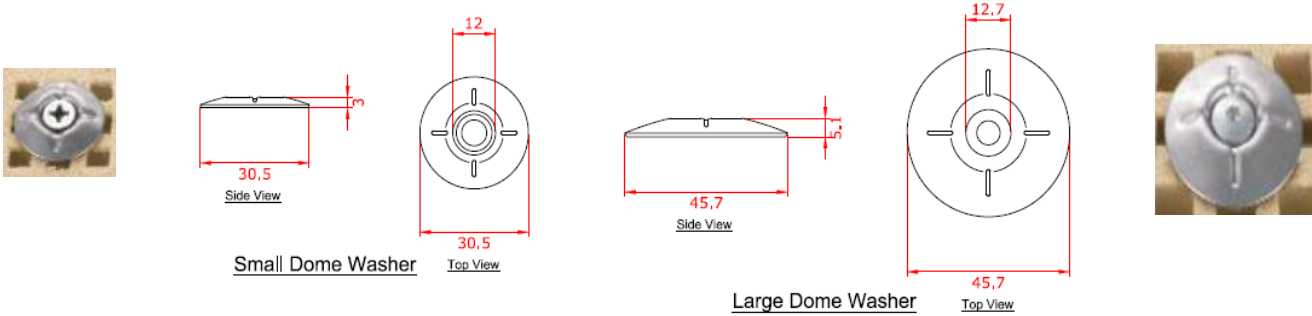
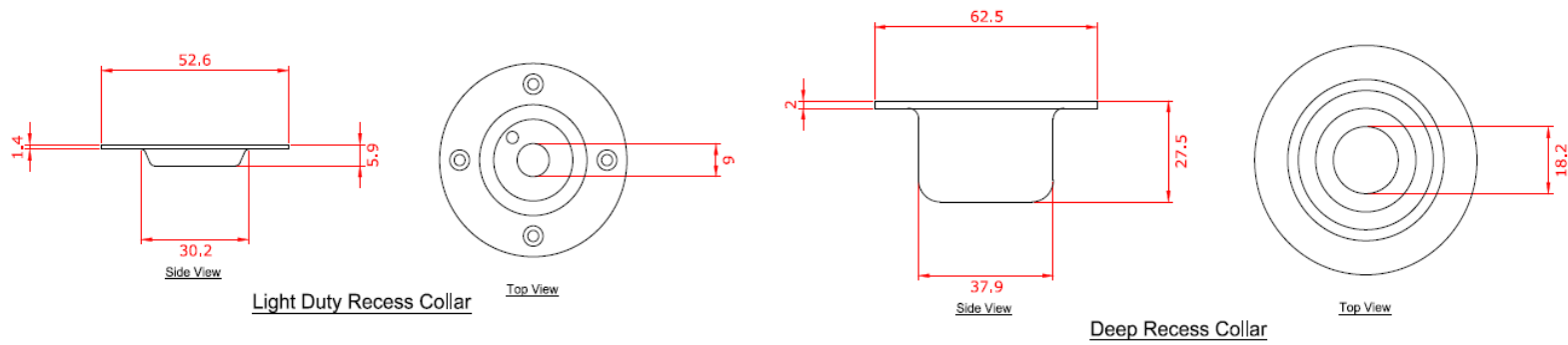
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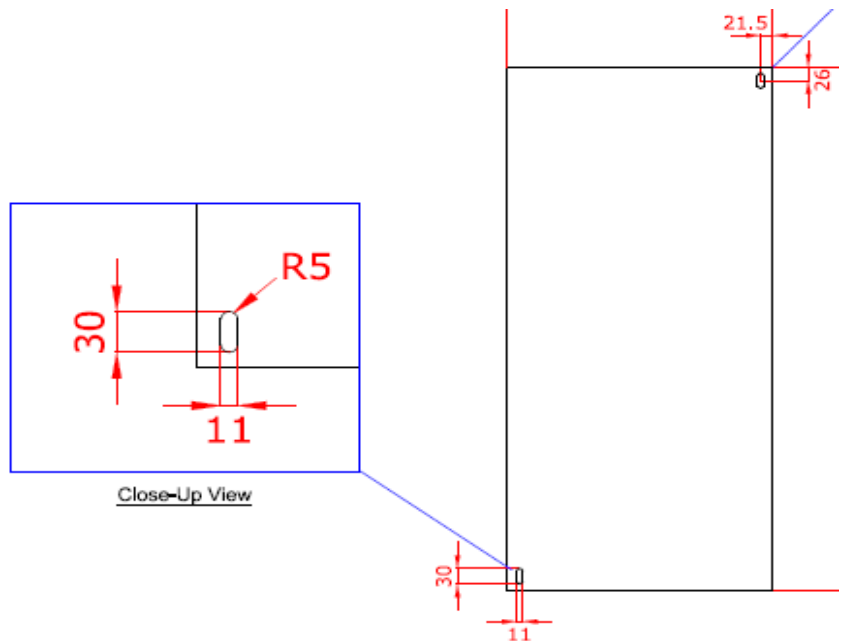
DuraSlab Standard Fixings & Accessories

Surface Mounted Fixings



Special Bolt Fixings to Suit Clip and Type of Substrate are available.

Lifting Eyes and Keys

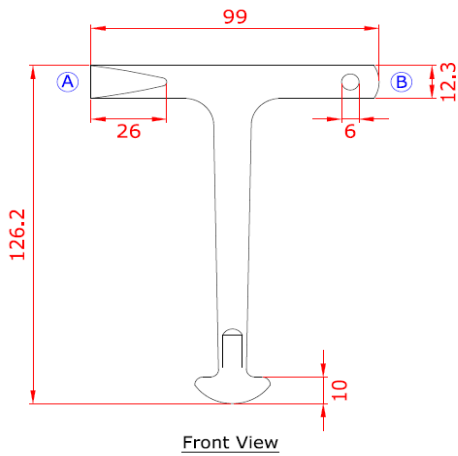


Dura Composites Ltd
Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom
Tel: +44 (0)1255 423601
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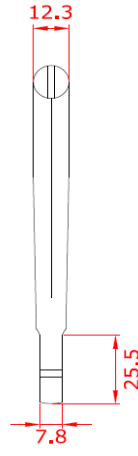
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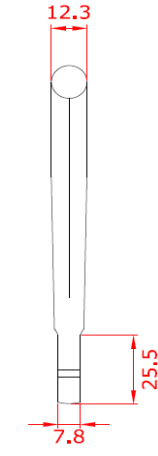
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Front View



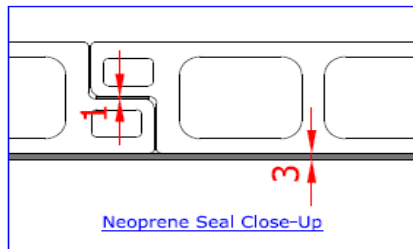
Side View A



Side View B

DuraSlab Seal

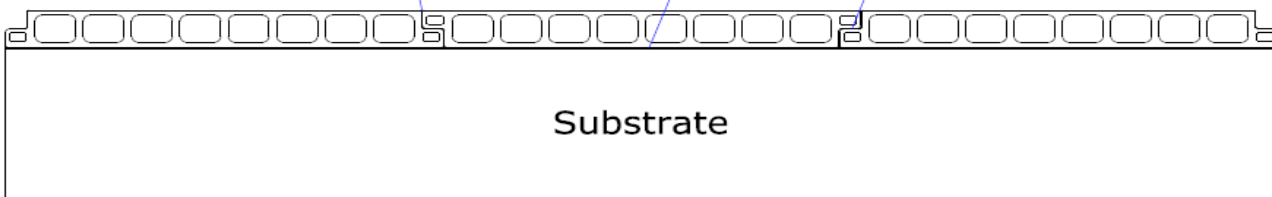
Lap Join Seal



Neoprene Seal Close-Up

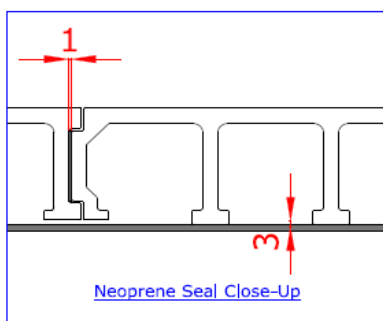
3mm Neoprene Seal
Single Side Adhesive

1mm Neoprene Seal
Single Side Adhesive



Substrate

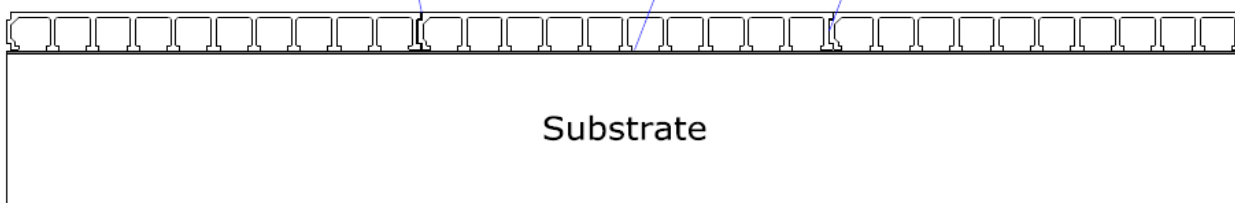
T&G Join Seal



Neoprene Seal Close-Up

3mm Neoprene Seal
Single Side Adhesive

1mm Neoprene Seal
Single Side Adhesive



Substrate

Dura Composites Ltd

Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom

Tel: +44 (0)1255 423601

Fax: +44 (0)1255 435426

info@dura.composites.com

www.dura.composites.com

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Safety Data Sheet

This section provides data for protection against substances hazardous to health.

Material Identification and Use

Chemical Name: Fibreglass Reinforced Polyester
Common Name: GRP (Glass Reinforced Plastics, Fibreglass)
Product Identification: **DuraSlab Pultruded**
Uses: Structural Flooring, Duct Cover, Trench or Gully Covers, Man Hole Cover.

Composition

E Glass fibres (Uni-Directional), Stitched Chop Strand Matt, Woven Roving Comb Matt, thermosetting plastic resin, catalysts, styrene, aluminium oxide, pigments. UV Inhibitor. Components are chemically and thermally cured and bonded together.

Hazard Identification

None by contact. Dust produced by cutting or grinding can penetrate pores and skin causing itching. Avoid breathing dust.
First Aid procedure: Skin – shower with water and soap. Eyes – flush with sterile eye wash solution.

Product Appearance

Open or closed profiles. Sharp edges. Zero odours. Not solvable in water. Standard colour Grey RAL 7047, others available on request.

Fire Fighting Measures

Standard extinguishing equipment, water, foam, A, B or C fire extinguishers. Produces black smoke while burning, carbon particles. Use air respirator.

Waste Disposal

Product is not considered a hazardous waste. Abide by local laws and procedures.

Handling/Cutting

Wear masks and goggles when cutting or grinding. Cover exposed parts of the body. Wear gloves when moving or lifting. Use diamond tipped tools for cutting.

Product Warranty

25 Year Warranty. Details available on request.

Company Information

| Head Office UK | Middle East | Australasia |
|--|---|--|
| Dura Composites Ltd Unit 14, Telford Road, Clacton-on-Sea Essex CO15 4LP United Kingdom Tel: +44 (0)1255 423601 Fax: +44 (0)1255 435426 www.duracomposites.com info@duracomposites.com | Advanced Fibreglass Industries P.O. Box 32276 Al Quoz, Dubai United Arab Emirates Tel: +971 4 340 3905 Fax: +971 4 340 3906 www.duracomposites.ae afi@emirates.net.ae | Dura Composites Australasia U2 , 65 Holder Way Malaga Western Australia 6090 Tel: +61 8 9248 9963 Fax: +61 8 9248 9949 www.dcaustralasia.com info@dcaustralasia.com |

Dura Composites Ltd
Unit 14, Telford Road
Clacton On Sea
Essex, CO15 4LP
United Kingdom
Tel: +44 (0)1255 423601
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Fax: +44 (0)1255 435426
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