

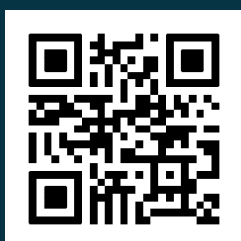
Moulded FRP Grating

Technical Data Guide



Confidence with every step

SCAN HERE



to discover more about
our FRP products

V.2024.3

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What is PermaStruct® FRP?

Fibreglass-reinforced plastic (FRP) 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.

How is FRP used?

FRP is an immensely versatile material which combines lightweight with inherent strength to provide a resilient finished product, 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 Resistant
- ✓ Chemical Resistant
- ✓ Electrical Resistant
- ✓ Low Tooling/Installation Cost
- ✓ Long Life

PermaStruct® FRP Grating is far superior in performance and life cycle cost compared to traditional materials.



PermaStruct® FRP Material Properties

| Characteristics | Unit | Reference |
|----------------------------|---------------------|------------|
| Grit Finishes | R13 | DIN 51130 |
| Tensile Strength | 220 MPa | ASTM D638 |
| Modulus of Elasticity | 13 - 15 GPa | ASTM D638 |
| Flexural Strength | 280 - 380 MPa | ASTM D790 |
| Compressive Strength | 158 MPa | ASTM D695 |
| Voltage Breakdown | 5 - 10 KV/mm | ASTM D149 |
| Density (specific gravity) | 1.7 - 1.8 kg/dm3 | ISO 1183 |
| Thermal Expansion Factor | 8-9 x 10-6 cm/cm/°C | ISO 11359 |
| Water Absorption Rate | 0.4 - 0.7% | ASTM 570 |
| Operating Temperature | 60 - 90 °C | |
| Flammability Resistance | <25 | ASTM E84 |
| Weatherability | | ISO 4892-2 |

PermaStruct® Resin Systems

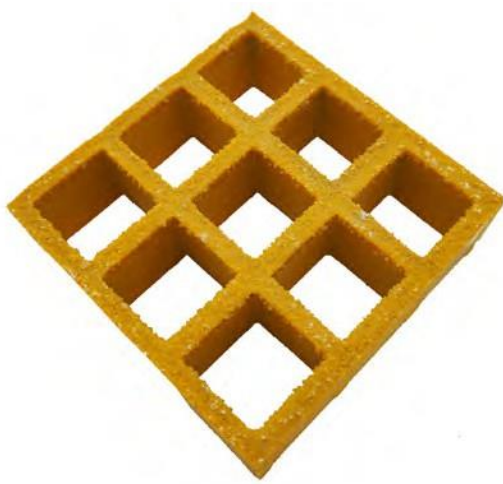
PermaStruct® FRP Grating is available with a variety of resin systems to achieve maximum performance in common industrial environments.

| Resin | Environment | Fire Rating | Availability |
|----------------------------|---|-------------|---------------------------|
| Isophthalic | For highly acidic environments | ASTM E84<25 | Stocked |
| Fire Retardant Isophthalic | For highly acidic environments where fire performance is also required. | ASTM E84<25 | Custom |
| Vinyl Ester | For the most extreme corrosive environment | ASTM E84<25 | Selected Items Stocked |
| Fire Retardant Vinyl Ester | For the most extreme corrosive environment where fire performance is also required. | ASTM E84<25 | Custom |
| Phenolic | For oil rigs, underground and any other environments where low smoke emission & toxicity is critical. | ASTM E84<10 | Custom |

PermaStruct® Standard Mesh Grating is the ultimate industrial walking surface for a wide range of commercial applications.

Featuring an anti-slip surface rated to the highest levels of slip resistance, it will not corrode and is far stronger, yet up to 60% lighter than traditional materials.

Consisting of a mixture of fibreglass and resin, it can be made into one-piece panels or custom made to fit the unique shape of a floor.



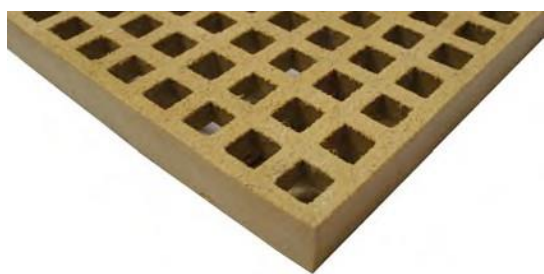
| Thickness mm | Panel Size mm | Hole Size mm | Approx. Panel Weight kg | Open Area | Colours | Slip Rating |
|--------------|---------------|--------------|-------------------------|-----------|---|-------------|
| 15 | 3660 x 615 | 32 x 32 | 20.26 | 68% | Yellow RAL 1003 | P5 |
| 25 | 3660 x 1220 | 32 x 32 | 54.00 | 68% | Yellow RAL 1003 Green RAL 6010 Grey RAL 7047 | P5 |
| 30 | 3660 x 1220 | 32 x 32 | 65.16 | 68% | Custom Order Item | P5 |
| 38 | 3660 x 1220 | 32 x 32 | 87.07 | 68% | Yellow RAL 1003 Green RAL 6010 Grey RAL 7047 | P5 |
| 50 | 3660 x 1220 | 32 x 32 | 104.93 | 71% | Yellow RAL 1003 Green RAL 6010 | P5 |
| 50 HD | 4010 x 1230 | 26 x 26 | 207.16 | 42% | Yellow RAL 1003 | P5 |

Please Note: All PermaStruct® panel sizes may vary by +/- 3mm due to manufacturing tolerances. The specification is a specification of performance and is subject to verification by the production of certified test results of actual products manufactured pursuant to any order.

PermaStruct® Mini Mesh Grating

PermaStruct® Mini Mesh Grating combines all the benefits of PermaStruct® Standard Mesh Grating and features a smaller hole size.

PermaStruct® Mini Mesh Grating is perfect for boardwalk and marine applications.



| Thickness mm | Panel Size mm | Hole Size mm | Approx. Panel Weight kg | Open Area | Colours | Slip Rating |
|-----------------|------------------|-----------------|-------------------------------|-----------|--|-------------|
| 14 | 3687 x 1247 | 13 x 13 | 48 | 42% | Custom Order Item | P5 |
| 21 | 3687 x 1247 | 13 x 13 | 69 | 42% | <div>SandRAL 1001</div> <div>Dark GreyRAL 7024</div> | P5 |
| 30 | 3687 x 1247 | 13 x 13 | 84 | 42% | Custom Order Item | P5 |
| 38 | 3687 x 1247 | 13 x 13 | 108 | 42% | <div>SandRAL 1001</div> <div>GreyRAL 7047</div> | P5 |

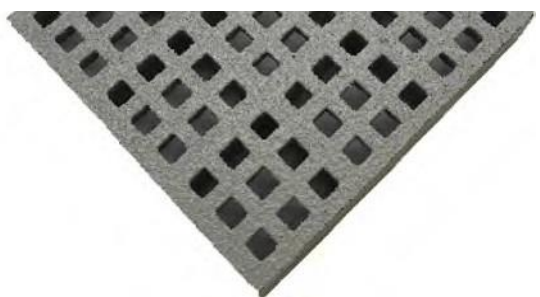
Please Note: All PermaStruct® panel sizes may vary by +/- 3mm due to manufacturing tolerances. The specification is a specification of performance and is subject to verification by the production of certified test results of actual products manufactured pursuant to any order.



PermaStruct® Micro Mesh Grating

PermaStruct® Micro Mesh Grating combines all the benefits of PermaStruct® Standard Mesh Grating and features a smaller hole size.

PermaStruct® Micro Mesh Grating is perfect for boardwalk and marine applications.



| Thickness mm | Panel Size mm | Hole Size mm | Approx. Panel Weight kg | Open Area | Colours | Slip Rating |
|-----------------|------------------|-----------------|-------------------------------|-----------|---|-------------|
| 21 | 3687 x 1247 | 8 x 8 | 70.3 | 36% | <div>SandRAL 1001</div> <div>GreyRAL 7047</div> | P5 |
| 30 | 3687 x 1247 | 8 x 8 | 86 | 36% | Custom Order Item | P5 |

Please Note: All PermaStruct® panel sizes may vary by +/- 3mm due to manufacturing tolerances. The specification is a specification of performance and is subject to verification by the production of certified test results of actual products manufactured pursuant to any order.



PermaStruct® Light Solid Top

PermaStruct® Light Solid Top is a fibreglass structural flooring solution. One high strength fibreglass solid plate are bonded to each side of a fibreglass mesh core material.

PermaStruct® Light Solid Top exhibits an incredible strength to weight ratio producing a composite flooring structure that is stiff and strong surface.



| Thickness mm | Panel Size mm | Approx. Panel Weight kg | Specification | Colours |
|-----------------|------------------|-------------------------------|---|---|
| 18 | 3660 x 1220 | 66.9 | 13mm Grating Core + 5mm Fibreglass Plate (Top) | Custom Order Item |
| 25 | 3660 x 1220 | 84.8 | 20mm Grating Core + 5mm Fibreglass Plate (Top) | Custom Order Item |
| 30 | 3660 x 1220 | 107.2 | 25mm Grating Core + 5mm Fibreglass Plate (Top) | Custom Order Item |
| 35 | 3660 x 1220 | 116.1 | 30mm Grating Core + 5mm Fibreglass Plate (Top) | <div>Yellow RAL 1003</div> |
| 41 | 3660 x 1220 | 133.9 | 38mm Grating Core + 3mm Fibreglass Plate (Top) ^{RA} | <div>Yellow RAL 1003</div> <div>Green RAL 6010</div> <div>Grey RAL 7047</div> |
| 5 | 3660 x 1220 | 151.8 | 50mm Grating Core + 5mm Fibreglass Plate (Top) | Custom Order Item |
| 65 | 3660 x 1220 | 245.58 | 60mm Grating Core + 5mm Fibreglass Plate (Top) | Custom Order Item |

Please Note: All PermaStruct® panel sizes may vary by +/- 3mm due to manufacturing tolerances.
The specification is a specification of performance and is subject to verification by the production of certified test results of actual products manufactured pursuant to any order.

PermaStruct® Heavy Duty Solid Top

PermaStruct® Heavy Duty Solid Top is a fibreglass structural flooring solution. Two high strength fibreglass solid plate are bonded to each side of a fibreglass mesh core material.

PermaStruct® Heavy Duty Solid Top exhibits an incredible strength to weight ratio producing a composite flooring structure that is stiff and strong surface.



| Thickness mm | Panel Size mm | Approx. Panel Weight kg | Specification | Colours |
|-----------------|------------------|-------------------------------|--|-------------------|
| 19 | 3660 x 1220 | 84.8 | 13mm Grating Core + 3mm Fibreglass Plate (Top) + 3mm Fibreglass Plate (Bottom) | Custom Order Item |
| 37 | 3660 x 1220 | 160.7 | 25mm Grating Core + 6mm Fibreglass Plate (Top) + 6mm Fibreglass Plate (Bottom) | Custom Order Item |
| 42 | 3660 x 1220 | 171.9 | 30mm Grating Core + 6mm Fibreglass Plate (Top) + 6mm Fibreglass Plate (Bottom) | Custom Order Item |
| 50 | 3660 x 1220 | 187.5 | 38mm Grating Core + 6mm Fibreglass Plate (Top) + 6mm Fibreglass Plate (Bottom) | Custom Order Item |
| 62 | 3660 x 1220 | 205.4 | 50mm Grating Core + 6mm Fibreglass Plate (Top) + 6mm Fibreglass Plate (Bottom) | Custom Order Item |
| 74 | 3660 x 1220 | 312.6 | 50mm Grating Core + 12mm Fibreglass Plate (Top) + 12mm Fibreglass Plate (Bottom) | Custom Order Item |

Please Note: All PermaStruct® panel sizes may vary by +/- 3mm due to manufacturing tolerances.
The specification is a specification of performance and is subject to verification by the production of certified test results of actual products manufactured pursuant to any order.

PermaStruct® Grating Load Table Uniformly Distributed Loads

HOW TO USE LOAD TABLE

- 1. Choose your desired load.
- 2. Choose your desired span.
- 3. Read off table across span column and look for corresponding value of deflection value in mm.
- 4. Compare deflection value with required maximum deflection limit.

| 3KPA - 300kg/m² | | | | | | | | |
|--|-------|-------|-------|-------|-------|--------|--------|--------|
| Grating Type | 500mm | 600mm | 700mm | 800mm | 900mm | 1000mm | 1100mm | 1200mm |
| PermaStruct® Standard Mesh Grating (38 x 38, 32 x 32 Hole Size) | | | | | | | | |
| 15mm Thick | 7.93 | - | - | - | - | - | - | - |
| 25mm Thick | 0.93 | 1.89 | 3.45 | 5.83 | 9.28 | 14.08 | - | - |
| 30mm Thick | 0.62 | 1.26 | 2.29 | 3.86 | 6.14 | 9.30 | 13.56 | - |
| 38mm Thick | 0.30 | 0.59 | 1.05 | 1.76 | 2.78 | 4.20 | 6.11 | 8.60 |
| PermaStruct® Standard Mesh Grating (50 x 50, 42 x 42 Hole Size) | | | | | | | | |
| 50mm Thick | 0.16 | 0.31 | 0.54 | 0.89 | 1.39 | 2.09 | 3.02 | 4.23 |
| PermaStruct® Standard Mesh Grating (38 x 38, 26 x 26 Hole Size) | | | | | | | | |
| 50mm Thick | 0.10 | 0.19 | 0.33 | 0.54 | 0.85 | 1.28 | 1.84 | 2.59 |
| PermaStruct® Mini Mesh Grating (20 x 20, 40 x 40, 13 x 13 Hole Size) | | | | | | | | |
| 21mm Thick | 1.30 | 2.64 | 4.85 | 8.23 | - | - | - | - |
| 38mm Thick | 0.28 | 0.55 | 0.99 | 1.65 | 2.61 | 3.94 | 5.73 | 8.07 |
| PermaStruct® Micro Mesh Grating (13 x 13, 40 x 40, 8 x 8 Hole Size) | | | | | | | | |
| 21mm Thick | 1.24 | 2.54 | 4.67 | 7.93 | - | - | - | - |
| 38mm Thick | 0.21 | 0.42 | 0.76 | 1.27 | 2.01 | 3.04 | 4.41 | 6.21 |
| PermaSlab Light Solid Top | | | | | | | | |
| 35mm Thick (30 + 5mm) | 0.29 | 0.55 | 0.97 | 1.59 | 2.49 | 3.72 | 5.37 | 7.53 |
| 41mm Thick (38 + 3mm) | 0.18 | 0.35 | 0.61 | 1.01 | 1.59 | 2.38 | 3.43 | 4.81 |
| PermaSlab Heavy Duty Solid Top | | | | | | | | |
| 42mm Thick | 0.13 | 0.23 | 0.36 | 0.55 | 0.81 | 1.16 | 1.62 | 2.20 |
| 62mm Thick | 0.07 | 0.12 | 0.18 | 0.27 | 0.39 | 0.54 | 0.74 | 0.99 |

If the table does not indicate desired grating product, or cannot satisfy design requirements, please contact us directly for further information.

DISCLAIMER

This table is made available for Perma Composites® for informative and educational purposes only, as well as provide a general understanding of grating products. It is NOT for providing specific engineering counsel. By using the following table, any misinterpretation of information, is not to be held against Perma Composites®. This table is not a substitution for professional engineering advice, and Perma Composites® should be contacted directly if any advice is required.

| 5KPA - 500kg/m² | | | | | | | | |
|--|-------|-------|-------|-------|-------|--------|--------|--------|
| Grating Type | 500mm | 600mm | 700mm | 800mm | 900mm | 1000mm | 1100mm | 1200mm |
| PermaStruct® Standard Mesh Grating (38 x 38, 32 x 32 Hole Size) | | | | | | | | |
| 25mm Thick | 1.55 | 3.14 | 5.75 | 9.72 | - | - | - | - |
| 30mm Thick | 1.04 | 2.10 | 3.82 | 6.44 | 10.23 | - | - | - |
| 38mm Thick | 0.49 | 0.98 | 1.76 | 2.94 | 4.64 | 7.00 | 10.18 | 14.33 |
| PermaStruct® Standard Mesh Grating (50 x 50, 42 x 42 Hole Size) | | | | | | | | |
| 50mm Thick | 0.27 | 0.51 | 0.90 | 1.48 | 2.32 | 3.48 | 5.03 | 7.05 |
| PermaStruct® Standard Mesh Grating (38 x 38, 26 x 26 Hole Size) | | | | | | | | |
| 50mm Thick | 0.16 | 0.31 | 0.55 | 0.91 | 1.42 | 2.13 | 3.07 | 4.31 |
| PermaStruct® Mini Mesh Grating (20 x 20, 40 x 40, 13 x 13 Hole Size) | | | | | | | | |
| 21mm Thick | 2.16 | 4.41 | 8.09 | - | - | - | - | - |
| 38mm Thick | 0.46 | 0.91 | 1.64 | 2.75 | 4.35 | 6.57 | 9.55 | 13.45 |
| PermaStruct® Micro Mesh Grating (13 x 13, 40 x 40, 8 x 8 Hole Size) | | | | | | | | |
| 21mm Thick | 2.07 | 4.24 | 7.79 | - | - | - | - | - |
| 38mm Thick | 0.36 | 0.71 | 1.27 | 2.12 | 3.35 | 5.06 | 7.35 | 10.36 |
| PermaSlab Light Solid Top | | | | | | | | |
| 35mm Thick (30 + 5mm) | 0.48 | 0.92 | 1.61 | 2.65 | 4.15 | 6.20 | 8.96 | 12.55 |
| 41mm Thick (38 + 3mm) | 0.30 | 0.58 | 1.02 | 1.69 | 2.64 | 3.96 | 5.72 | 8.02 |
| PermaSlab Heavy Duty Solid Top | | | | | | | | |
| 42mm Thick | 0.22 | 0.38 | 0.60 | 0.92 | 1.35 | 1.94 | 2.69 | 3.66 |
| 62mm Thick | 0.12 | 0.20 | 0.31 | 0.45 | 0.65 | 0.90 | 1.23 | 1.64 |

PermaStruct® Fixing Clips

| Fixing | Hole Diameter | FRP Grating | Part Number | ISO | Elevation |
|------------------------|---------------|---------------|-------------|--|---|
| Clip | 8 mm | Mini Mesh | IF MT 12 |  |  |
| M Clip | 8 mm | 15mm Mesh | IF MT 15 |  |  |
| M Clip | 8 mm | 25mm Mesh | IF MT 25 |  |  |
| M Clip | 8 mm | 38mm Mesh | IF MT 38 |  |  |
| M Clip | 8 mm | 50mm Mesh | IF MT 50 HD |  |  |
| J Clip | 8 mm | Standard Mesh | IF JC |  |  |
| G Clamp / Panel Joiner | 6 mm | 15mm Mesh | IF PJ 15 |  |  |

All clips are made of 316 Stainless steels.

| Fixing | Hole Diameter | FRP Grating | Part Number | ISO | Elevation |
|--------------------------|---------------|-----------------|-------------|---|---|
| G Clamp / Panel Joiner | 6 mm | 25mm Mesh | IF PJ 25 |  |  |
| G Clamp / Panel Joiner | 6 mm | 38mm Mesh | IF PJ 38 |  |  |
| L Clip | 8 mm | 15mm Mesh | IF LC |  |  |
| Dome Washer | 6 mm | Mini/Micro Mesh | IF SD6 |  |  |
| Dome Washer | 8 mm | Standard Mesh | IF SD8 |  |  |
| Square Recessed Washer | 8 mm | Standard Mesh | IF SRC |  |  |
| Circular Recessed Washer | 8 mm | All Meshes | IF CRC |  |  |

PermaStruct® Product Specification

Manufacturing Tolerances

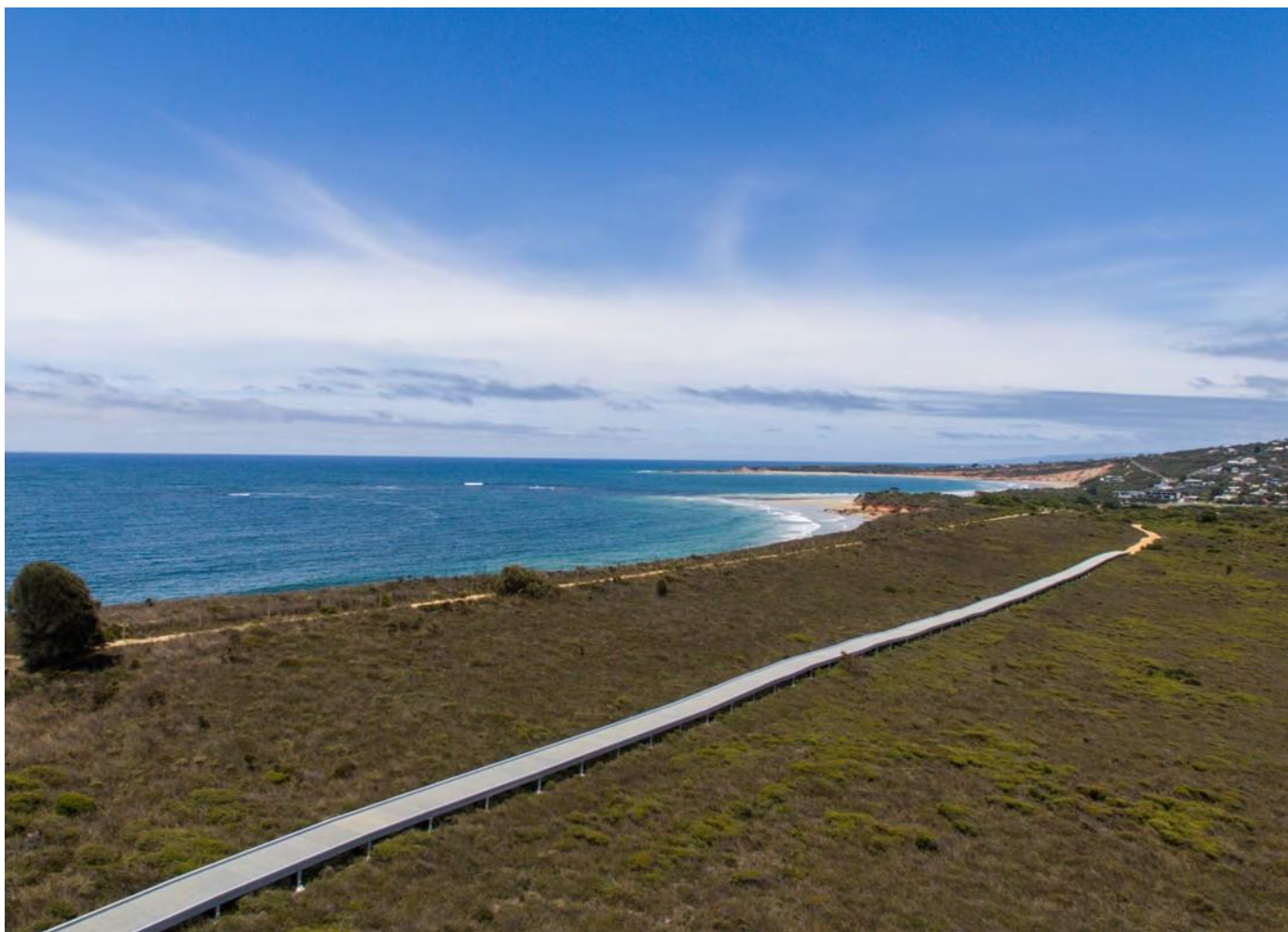
| | | |
|---------------------|--------|--------|
| Standard Panel Size | +3mm | -3mm |
| Cut Panel Size | +3mm | -3mm |
| Thickness | +1mm | -1mm |
| Mesh Pattern | +0.5mm | -0.5mm |

Colour and Surface Finish

PermaStruct® FRP Grating can be made in any RAL colour.

Chemical Resistance

PermaStruct® FRP Grating standard product is resistant against a wide range of chemicals and temperature spectrum. PermaStruct® FRP Graing can be manufactured in different resin systems to achieve specific chemical resistant properties.



PermaStruct® MSDS

| Section 1 - Product Identifier & Chemical Identity | |
|--|---------------------------|
| Product Identifier | PermaStruct® FRP |
| Details of Manufacturer or Importer | Perma Composites® Pty Ltd |
| Emergency Phone Number | 1300 366 938 |

| Section 2 - Hazard Identification | |
|-----------------------------------|--|
| GHS Classification | Skin Irritation, Category 1 |
| Signal Word | Caution |
| Hazard Statement | FRP does not release or otherwise result in exposure to hazardous chemicals under normal conditions of use. It is therefore not considered a hazardous material. |
| Precautionary Statement | Dust will be generated if this product is drilled, sanded, or ground |

| Section 3 - Composition & Information on Ingredients | | |
|--|------------|-------------|
| Chemical Component | CAS Number | Percent (%) |
| Polymerized Resin | None | 30 – 75 |
| Fibreglass | 65997-17-3 | 20 – 70 |
| Quartz Sand | 14808-60-7 | 1 |

| Section 4 - First Aid Measures | |
|---|---|
| Description of Necessary First Aid Measures | Wash skin well without rubbing. Change clothing after exposure and apply antiseptic to any abraded skin. For eyes, use a sterile solution and flood the eye area. |
| Symptoms Caused by Exposure | Temporary irritation and itching to skin or eyes. Scratchiness or burning of the nose and /or throat if exposed to a large amount of airborne dust from cutting or machining. |

| Section 5 - Firefighting Measures | |
|---|---|
| Suitable Extinguishing Equipment | Water, Foam, CO2 Dry Chemical |
| Specific Hazards Arising from the Chemical | Burning FRP creates a complex mixture of solid, liquid and gases. Carbon monoxide and other organic compounds may be given off. |
| Special Protective Equipment and Precautions for Firefighters | Use self-contained breathing apparatus with full face operated in pressure mode. |

Section 6 - Accidental Release Measures

| | |
|---|--|
| Personal Precautions, Protective Equipment and Emergency Procedures | No-sparking tools shall be used. Avoid dispersal of dust in the air. |
| Environmental Precautions | Prevent dust from cutting, grinding or sanding from entering water systems or down drains. |
| Methods and Materials for Containment and Cleaning Up | Dust deposits from fabrication should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. |

Section 7 - Handling & Storage

| | |
|----------|---|
| Handling | Use personal protection equipment to minimize skin, respiration and eye exposure to dust and fumes when cutting or grinding product. Do not rub or scratch skin if dust particles have accumulated on exposed skin. Wash all exposed skin areas thoroughly after cutting or grinding. |
| Storage | No special storage conditions exist |

Section 8 - Exposure Controls & Personal Protection

| | |
|-------------------------|---|
| Eye and Face Protection | Wear protective eyewear with side shield or ventilated goggles when cutting or grinding. |
| Skin Protection | Barrier cream or long sleeve shirts with closed collars, long pants or protective clothing may be worn to prevent dust exposure when cutting or grinding product. |
| Respiratory Protection | Approved dust mask with PEL not less than 0.1 mg/M3 when cutting or grinding |
| Protective Gloves | Wear cloth gloves when handling products to prevent cuts, scratches or abrasions |

Section 9 - Physical & Chemical Properties

| | |
|---------------------------|--------------------------------|
| Appearance | Solid Article, Various Colours |
| Auto Ignition Temperature | >420 Degrees Celsius |
| Odour | Mild, Characteristic Odour |
| Relative Density | 1.6 – 2.0 |

Section 10 - Stability & Reactivity

| | |
|------------------------------------|---|
| Chemical Stability | Yes |
| Possibility of Hazardous Reactions | Not Applicable |
| Conditions to Avoid | Sources of ignition, sparks, or flames, extremely high temperatures |

Section 11 - Toxicological Information

| | |
|-----------------------------------|--|
| Acute Toxicity | Not Applicable |
| Skin Corrosion / Irritation | Dust from machining can cause irritation |
| Serious Eye Damage / Irritation | Dust from machining can cause irritation |
| Respiratory or Skin Sensitisation | Dust from machining can cause irritation |
| Germ Cell Mutagenicity | Not Applicable |
| Carcinogenicity | Not Applicable |
| Reproductive Toxicity | Not Applicable |
| Aspiration Hazard | Not Applicable |

Section 12 - Ecological Information

| | |
|------------------------------|--|
| Environmental Data | Dust, generated from cutting, sanding or grinding, may be harmful to the environment if allowed to directly enter water sources. |
| Ecotoxicology Information | Not Applicable |
| Bioaccumulation Accumulation | Not Applicable |
| Distribution | Not Applicable |
| Aquatic Toxicity | Not Applicable |
| Chemical Fate Information | Not Applicable |

Section 13 - Disposal Considerations

| | |
|---------------------------------|---|
| Disposal Containers and Methods | Control and collect any dust generated in sturdy containers to prevent dispersal. Dispose of in accordance with all federal, state and local regulations. |
|---------------------------------|---|

Section 14 - Transport Information

| | |
|------------------------|----------------|
| Proper Shipping Name | Not Applicable |
| Transport Hazard Class | Not Hazardous |

Section 15 - Other Relevant Information

| | |
|---------------------|------------|
| Date of Preparation | 18/10/2022 |
| Version Number | 3 |

PermaStruct® Fabrication Guideline

Essential Safety Guidelines for Working with FRP Products:

Familiarize Yourself:

Before cutting FRP products, make sure to thoroughly read the Materials Data Sheet (MSDS). If it is not available, contact Perma Composites or visit our website www.permacomposites.com for additional information before proceeding with fabrication. For the safety and well-being of individuals with respiratory ailments, it is strongly advised to refrain from engaging in the fabrication of FRP products.

Personal Protective Equipment (PPE):

Practice standard safety precautions when using cutting tools. Always wear protective gloves when handling FRP products. Utilize approved safety glasses or goggles to safeguard your eyes and wear an approved mask (with a permissible exposure limit (PEL) of not less than 0.1 mg/M³) to minimize dust inhalation. Dust produced during cutting FRP products can cause skin irritation. Wear appropriate clothing to reduce skin exposure to dust. IF CUTTING LEADS TO BREATHING DIFFICULTIES OR EXCESSIVE SKIN IRRITATION, STOP IMMEDIATELY AND SEEK MEDICAL ADVICE.

Epoxy/Sealing Coating Precautions:

When using epoxy/sealing coatings, adhere to general safety practices. Carefully read and follow the instructions provided with the product before application. Always wear PPE when working with FRP products or using epoxy/sealing coatings. AVOID SKIN CONTACT WITH RESIN OR CATALYST.

By adhering to these recommended safety practices, you can ensure a safer working environment when handling FRP products and protect yourself from potential hazards.

Essential Tools for FRP Fabrication:

- A power circular saw with a masonry or diamond blade for straight cuts
- Power Jig saw with a masonry or diamond blade for circular cuts.
- For extensive fabrication tasks, it is recommended to utilize a diamond grit blade for enhanced efficiency.
- Sawhorses or a sturdy platform are required to provide adequate support to the products during the cutting process.
- To ensure precise cuts, have a tape measure, straight-edge, and chalk lines or a felt-tip pen on hand for marking the cutting lines. These marking tools will help you achieve accurate dimensions and shapes.

FRP Installation Procedure:

Cutting and Shaping:

- Firmly support the panel to avoid flexing or shifting during cutting.
- Mark the cutting lines clearly and precisely.
- Avoid splitting of bars.
- Cut from the smooth side (bottom) of a gridded panel to achieve cleaner edges.
- Apply even and steady pressure when cutting to avoid generating excessive heat or producing ragged edges. Regularly replace blunt or worn blades to maintain clean cuts and prevent buildup.

Surface Protection:

Coat all holes, cut/trimmed edges or sanded surfaces with a sealer to safeguard against corrosive chemicals reaching exposed fibres. Follow the provided instructions for the epoxy sealer.

Fixing clips:

Utilize recommended fixing clips, spacing them a maximum of every 1000mm and using a minimum of four clips per panel for secure fastening.

By following these meticulous installation procedures, you'll ensure the longevity and integrity of the FRP installation while achieving a professional and aesthetically pleasing outcome.

Tips:

- One of the significant benefits of utilizing PermaStruct FRP grating lies in the straightforward fabrication process.
- The procedures such as sawing, grinding, drilling, and machining closely resemble working with other construction materials.
- To enhance precision, conduct fabrication on-site whenever possible.
- When performing take-offs and layouts, it is essential to account for the saw thickness.

NOTES:



The Composite
Experts
Innovation
Design
Engineering
Experts

Mining, Construction,
Engineering and Marine

See the full PermaStruct® range at
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