

Working with Composites



Before You Begin

These guidelines are provided to help prevent installation problems caused by common errors when working with GRP Dura Profile components. Dura Composites bears no responsibility for installation actions taken or not taken.

There are many bespoke aspects of installation that are assumed to be general construction knowledge to an experienced installer; and as such are not included in this Technical Manual. The guidance below are strictly recommendations and are not intended to serve as a step-by-step, foolproof installation checklist. Selection of an experienced GRP installer is the sole responsibility of the project owner.

If you have any questions about installation techniques for your particular project, please call your Dura Composites representative on 1300 043 872.

Safety First

Every Dura Profile installation site is different and is likely to present different hazards and risks. However, a well-designed and maintained site with suitable segregation of vehicles, equipment and people will make workplace accidents less likely. Some important considerations to bear in mind:

- Please ensure that your proposed design or fabrication meets any relevant local building codes and regulations before you begin the installation.
- Keep members of the public and other personnel not involved in the installation of Dura Profile away from the work area until the job has been completed and tools and materials have been stored safely.
- Refer to the operators' manuals for safety guidance on all power tools being used.
- Long sleeved shirts with closed collars, long trousers or protective clothing such as disposable overalls may be worn to prevent dust exposure when cutting or grinding the product.
- When handling Dura Profile, always wear gloves and a suitable barrier cream to prevent cuts, scratches or abrasions.
- Always ensure you have adequate eye and face protection and work in a well-ventilated area. Fusing a respirator, to ensure that it is effective, users should be clean shaven, and the respirator should have a close fit.

Required Tools

Dura Profile can be installed using a number of standard tools. The list of tools and supplies you may need includes the following:



Measuring Tape



Eye Protection



Face Fit P3 RPE



Tungsten Carbide Drill Bits



Skill Saw



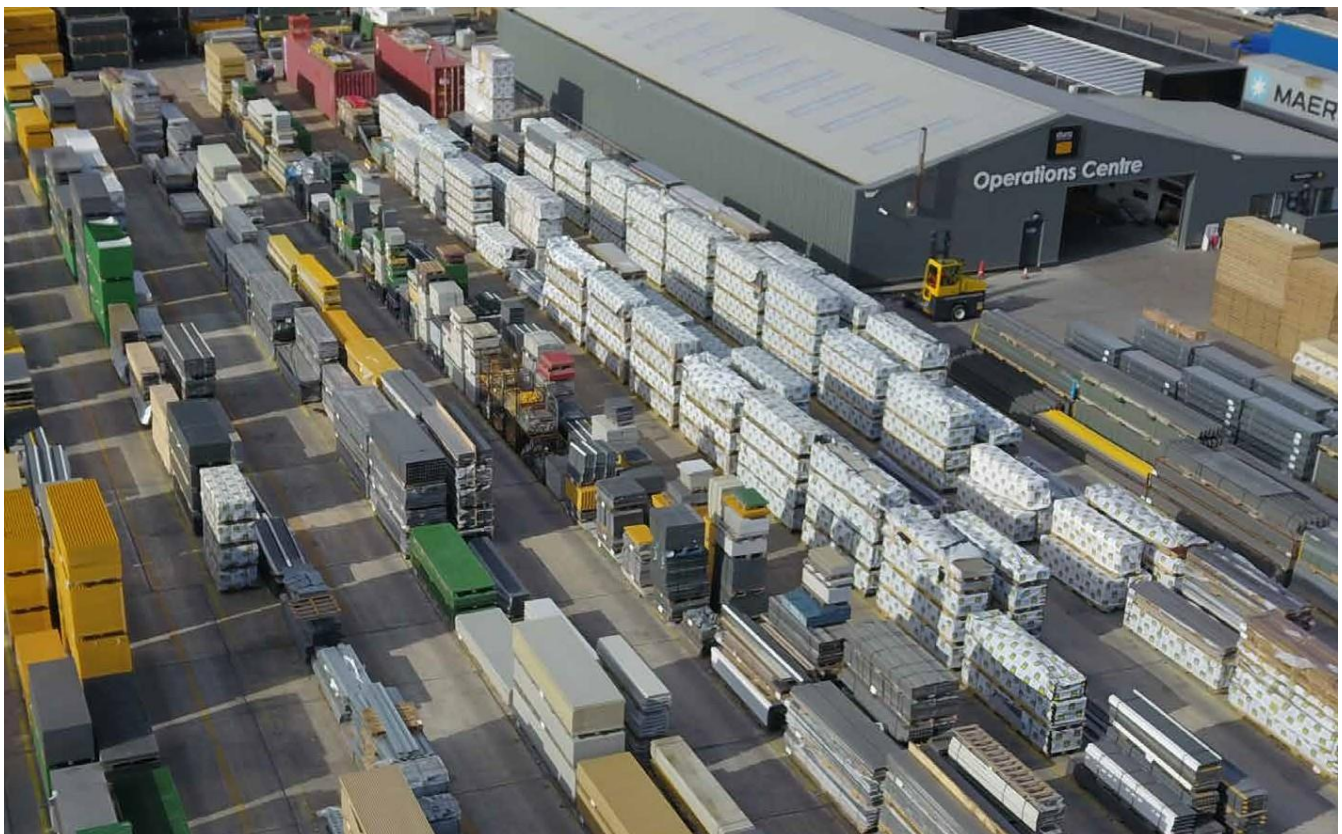
Diamond Tipped Saw Blade

Storage and Handling

To ensure the best performance of our products, it is vital that proper care and attention is given to storage and handling of materials.

Dura Profiles should be stored on a flat and level surface in their original packaging until you are ready to install them. Professional fork lifts should always be used while uploading and discharging pallets.

Dura Profiles are easy to install and can be cut to size and drilled using conventional power tools. The lightweight composition of Dura Profiles means that they are easier to handle than traditional steel components and can be installed more quickly.



Materials Safety Data



Product Composition

| CAS No. | Percentage % |
|--|--------------|
| Isophthalic Polyester Resin | 30% |
| E-Glass (Rovings/mats) | 60% |
| Additives, pigments, stabilisers and other | 10% |

Safety Information

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

Safety Precautions

- Store in original packing materials in a dry, cool and well-ventilated area. Keep away from heat, sparks and open flame.
- Workers should wear personal protective equipment at all times that is clean and has been properly maintained, including the use of safety gloves. Handle product carefully to avoid damage.
- Avoid eating, drinking and smoking in the workplace.

Exposure Controls and Personal Protection

| | |
|------------------------|--|
| Eye/Face Protection | Suitable safety goggles should be worn to reduce the potential risk due to dust. |
| Respiratory Protection | Wear a suitable dust mask if cutting operation creates dust. |
| Protection of Hands | Work gloves should be worn to reduce the potential risk of small cuts and abrasions which could occur during the installation process. |

Physical and Chemical Properties

| | |
|------------|--|
| Appearance | No odour. Non-toxic. |
| Solubility | Insoluble in water and alcohol, soluble in dichloroethane and methylbenzene. |
| Usage | Decorative external or internal usage as dagger boards, screening, fencing, valances, wall linings, soffits, canopy roofing, fencing and barriers. |

Stability and Reactivity

| | |
|---|--------------------|
| Stability | Stable. |
| Incompatibility With Various Substances | No data available. |

Ecological Information

| | |
|---------------|--|
| Recyclability | Due to the extensive life cycle of the material, off cuts can be used for secondary non structural purposes as required or returned to Dura Composites at end of life for recycling. |
|---------------|--|

Disposal Considerations

| | |
|--------|--|
| Method | Waste should be disposed of according to local legislation. Can be recycled or incinerated where local policies allow. |
|--------|--|

Transport Information

| | |
|---------------------|-----|
| Dangerous Goods No. | N/A |
| UN No. | N/A |

| | |
|---|--|
| Packing | Palletised. Shrink wrapped and protected from water. |
| Hazard Identification | |
| Health Hazards | Non-Hazardous under normal conditions and use. Fine particles released during cutting may cause irritation to the eyes and respiratory tract. |
| Explosive Danger | Deposited dust has no self-sustained flame. This product is not classified as a dust explosive. |
| First Aid Measures | |
| Skin Contact | Not applicable under normal use. Fine particles released during cutting - wash with soap and water. |
| Eye Contact | Rinse or flush eyes with clean water for up to 10 minutes holding eyelids apart. Seek medical advice. |
| Inhalation | Not applicable in normal use. If thermal decomposition occurs and vapours have been inhaled, affected person is to be moved to fresh air and seek medical attention. |
| Ingestion | Not applicable in normal use. If ingestion of dust occurs during cutting, rinse mouth out with water and seek medical advice. Do not induce vomiting. |
| Firefighting Measures | |
| Hazardous Characteristics | High thermal decomposition will evolve toxic and irritant vapours. |
| Extinguishing media | Isolate product and move to an empty area if practical. Extinguish fire using Spray Mist, Foam, CO ² , Sand or Earth. |
| Accidental Release Measures | |
| Personal Precautions, Protective Equipment and Emergency Procedures | <p>Personal precautions not applicable under normal conditions. Avoid build of dust during any cutting process. If packaging becomes broken, please re-pack.</p> <p>Environmental precautions not applicable under normal conditions. Material should be collected in clean containers and recycled where practicable.</p> |

Material Identification and Use

Chemical Name: Fibreglass Reinforced Polyester
 Common Name: GRP (Glass Reinforced Polymers, Fibreglass)
 Product Identification: **Dura Profile**
 Uses: Fabrications, handrailing, structures, staircases, platforms, access platforms, step overs, ladders.

Composition

E Glass fibres (Uni-Directional), Stitched Chop Strand Matt, Woven Roving Comb Matt, thermosetting polymer 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, skin contact or dust inhalation when cutting. People with a condition that could be aggravated by dust should avoid cutting or grinding.

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 soluble in water. Standard colour Grey RAL 7043, others available on request subject to minimum order quantities.

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

Risk assessments for dust, abrasive surfaces, and manual handling should be carried out prior to working with Dura Profile. When cutting, your PPE should include suitable face fit RPE and eye protection to protect from dust. When handling GRP, suitable gloves and coveralls should be worn to prevent abrasion to skin.

Maintenance

Cleaning Guide

Our GRP products are extremely hardwearing and virtually maintenance free, however, to maintain maximum performance they will require cleaning periodically. The frequency of this cleaning will depend on local conditions and volume of pedestrian traffic. Generally, a stiff brush and hot soapy water will be sufficient to remove most dirt, or dust from Dura Profile components, however more stubborn grime may have to be removed by using high pressure power washing. It is suggested the integrity of any mechanical fixings and effectiveness of adhesive are checked annually.

Please note that the correct cleaning regime for your product is subject to site conditions. Please refer to the Technical Information below for the approved cleaning and maintenance programme to maintain your product warranty.

Cleaning Guide for Dura Grating Flooring Surfaces when Used in Conjunction with Dura Profile (e.g. in the case of Access Structures)

For general cleaning, any road traffic film cleaner can be used.

Usage Method:

- Scrub chemicals onto affected area with a hard-bristled brush
- Leave for 10 – 15 minutes
- Jet wash the solution off
- If the area is still not clean repeat the process

Pressure Washers or Steam Cleaning Equipment

Care should be taken to select suitable equipment. These pieces of equipment can be extremely powerful, proper training should be given to ensure they are used safely.

General Cleaning Tips and Advice

| Do | Do Not |
|--|---|
| <ul style="list-style-type: none">• Conduct an initial clean before use.• Clean regularly.• Consider giving a higher frequency of maintenance to heavily trafficked areas (e.g. entrances) where the levels of grit, dirt and wear are highest. Heavily trafficked areas need more attention.• Clean up spillages immediately.• Remove traces of oil and grease immediately.• Ensure that cleaning and maintenance levels are higher in areas subject to accidental contamination by chemicals or | <ul style="list-style-type: none">• Do not use excess concentrations of cleaning agents - exceeding the manufacturers' recommended dosage is at best pointless and expensive and at worst harmful.• Do not mix cleaning chemicals and agents - this can be harmful.• Do not use excessive water.• Do not use solvents.• Do not use synthetic scrubbing pads on textured resin floor finishes. These industrial finishes will cause rapid destruction of the pads. |

| Do | Do Not |
|---|---|
| <p>bacteriological or radioactive materials.</p> <ul style="list-style-type: none">• Use brushes (not mops) for best results.• Use the best quality equipment available to you.• Ensure that cleaning equipment is regularly cleaned.• Follow the instructions provided by the manufacturers of chemicals and equipment. | <ul style="list-style-type: none">• Do not use phenol based cleaning chemicals - they will cause degradation of resin floor surfaces. |

Cleaning of General Dirt and Debris on Dura Grating

Using Alkaline Detergent Solution apply with brush, Spray with hose to remove surface debris. Use warm soapy water and a hard bristled brush to clear dirt and/or debris from grooves/contours. Pressure wash to remove more stubborn stains.

Cleaning of Mould and Mildew

Mould and mildew can grow on surface residue that has been allowed to remain on the surface. Remove and brush as soon as possible – spray with a hose and use warm soapy water and soft bristle brush. Pressure wash for more stubborn stains.

Cleaning of Oil/Grease/Food/Drink

Remove and brush as soon as possible — spray with a hose and use warm soapy water and a soft bristled brush. Pressure wash for more stubborn stains. Pressure washers up to 1500 psi may be used to maintain cleanliness. In order to prevent any damage, always keep the pressure washer nozzle at least 25cm (10 inches) from the surface, and avoid concentrated spraying on one area for more than 3 seconds. Use of a pressure washer in this manner will not shorten the life of the material.

Cleaning of Ice and Snow

Use a plastic shovel or broom to remove snow.