

GRP Structural Profiles

Inspection and Maintenance Guidance

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Scope

Pultruded GRP angles, channels, tubes, beams, box sections and related profiles sold by GRP Express. This guide does not replace an engineered structural inspection.

Set the inspection frequency

There is no single interval suitable for every installation. The responsible person should set and record a risk-based frequency that reflects usage, traffic, consequence of failure, access, contamination, UV, temperature, moisture, marine or wastewater exposure, chemicals, impact, abrasion, vibration and known site events. Inspect after an impact, overload, fire, chemical spill, support alteration or other event that could have affected performance.

What to check

- Cracking, splitting, delamination, exposed fibres or impact damage.
- Local crushing, bolt-hole damage, connection slip or excessive movement.
- Loose, missing, incompatible or corroded bolts, plates and fixings.
- Unexpected deflection, twist, buckling or change in alignment.
- Damaged cut edges, unsealed exposed reinforcement or unapproved drilling.
- Changes to loads, support positions, restraint, temperature or vibration.
- Resin erosion, chalking, discolouration or damage after UV or chemical exposure.
- Fire, sustained heat or electrical events affecting the installation.

Cleaning

Remove contamination with water and a mild detergent demonstrated compatible with the resin system. Do not use unverified solvents or methods that abrade the resin-rich surface. Cleaning does not establish structural fitness.

When to isolate and request technical review

Restrict access or unload the affected area where condition or movement could present a risk. Seek competent technical review for cracks, delamination, exposed fibres, significant grit loss, abnormal deflection, damaged supports, repeated fixing movement, chemical attack, heat or fire exposure, or any change to loads, spans or application. Do not disguise damage with paint, filler or an unverified repair.

Records and replacement

Record location, product identification, date, conditions, photographs, findings, action, replacement parts and reviewer. Replace damaged or unserviceable parts only with a confirmed compatible specification. Retain order documents, drawings, revisions and any guarantee terms that applied on the order date.

Important limitations

This is general inspection and cleaning guidance. It is not a structural assessment, design verification, guarantee or statement of service life. Exact requirements may differ by manufacturer, resin system, fixing system, installation and exposure. For product-specific support contact support@grpexpress.co.uk. Engineered project-life and structural assessments should be referred to Vital GRP.