

This technical update provides additional guidance on GRP (Glass Reinforced Polyester) roofing requirements. It is important that all workmanship carried out during construction is completed in accordance with the relevant tolerances.

This update discusses the standards that apply to site-applied GRP roofing. The GRP market is very competitive with quality control of products and installation being an issue.

The two main associations that cover roofing and GRP are:

- NFRC – National Federation of Roofing Contractors
- Construction Glass Fibre Manufacturers association (CGFMA) – independently assess factory made glass fibre false chimneys, dormer and bay roofs

However, neither NFRC nor CGFMA cover site-applied glass fibre roofing.

Construction process of site-applied GRP

Preformed GRP sections are adhered in place to form the upstands and trims, the joints of the roof are then sealed. Following this, the GRP sheets are supplied to site and fixed to the roof deck using resin and a catalyst. Once cured the top coat of GRP is then applied.

Acceptability for warranty

Products will, for warranty purposes, require an independent third party product approval for the product (e.g., BBA, BRE or similar, or a European Technical Approval (ETA) and must include details of the installation and approved installer system). The system will require to have a minimum life expectancy of at least 15 years. The installation may also require to be tested at completion (i.e. including any external fittings installed such as fall protection devices, air conditioning units, etc.) installed by other contractors after the roof covering is completed.

Testing recommendations for GRP roofs and balconies

Testing will be required in the following situations:

1. Large developments (apartments, etc., over three stories in height, including the ground storey)

When the total combined roof/balcony areas exceeds 50m². In this case, 20% of the roof areas must be tested.

2. Low rise housing (detached/semi-detached/ terraced housing three stories or less in height, including the ground storey)

Roof/balcony areas under 50m²: No testing required except:

Where the project consists of 10 or more properties: one test per ten houses (with a minimum of two tests per site) are required.

3. In addition to above, in all cases:

Testing may be required in the following situations and it will be necessary to identify this at the initial site assessment carried out between the developer and the warranty surveyor:

Design:

- If the roof includes features beyond a typical wall abutment, e.g., (but not limited to) variations of upstand constructions/penetrations/fixings/external permanent machinery/balustrading fittings, etc.
- The waterproof membrane is to be covered over (by pedestrian finishes or solar panels). Note: Inverted roofs of straightforward design and with continuous hot-applied waterproof membrane could be exempted.

Construction:

- If there are to be/have been, following trades on the roof after completion of the roofing package.
- If secondary items such as fall protection devices, PV supports, balustrades, etc., are to be attached after roof/balcony area is completed.

Recommendations: There are two standards applicable for products/systems requiring warranty approval:

Factory made products

- I.e., dormers, chimneys, etc., to have third party certification. Products independently approved by the CGFMA are acceptable to our warranty standards.

Site-applied GRP

- Site-applied products to have third party certification the product should be used in strict accordance with the third party certification.
- Site-applied GRP products must be installed by an approved contractor and a guarantee given by the manufacturer confirming suitability of design materials and workmanship.
- A minimum of 1:80 as built fall should be provided.
- Our requirements for testing should be followed.

Every care was taken to ensure the information in this article was correct at the time of publication. Guidance provided does not replace the reader's professional judgement and any construction project should comply with the relevant Building Regulations or applicable technical standards. For the most up to date Premier Guarantee technical guidance please refer to your Risk Management Surveyor and the latest version of the [Premier Guarantee Technical Manual](#).