

GFRP (glass fibre reinforced polymer) – Handling & Safety Instructions

GFRP composite rebars are highly durable, making them easy to handle and install. Incorrect handling could compromise safety and performance. Please observe the following guidelines for handling, safety and storage.

Handling & Cutting

Care is advised in the handling of these materials during storage and installation:

- Open packaging completely and do not force out of packaging.
- Do not drag on the ground or across sharp edges as this can score the GFRP bars.
- On-site cutting is permitted by means of carbide or diamond-coated blades. Do not use shears.
- Always wear a mask or a respirator when cutting GFRP Bars.
- **Gloves must be always worn when handling GFRP Bars, to avoid abrasions, cuts etc.**

Shipping | Storage

GFRP bars must be packaged and shipped according to the manufacturer's guidelines. Please contact the Madewell office if re-packaging and secondary shipping is required. Damage by excessive force and/or heavy impacts may occur so observe the following best practices:

CAUTION: Permanent bends are prepared by the manufacturer and delivered to the site ready for installation. Bending of bars on site is neither practical nor necessary for very large radius bends. GFRP bars can be bent elastically into place and firmly held into position. If released without controls, the elastic energy will cause GFRP bars to snap back quickly to its original shape, which may result in injury.

- Always use proper hoisting equipment and multiple lifting points when handling bundled bars.
- Never store or place on sharp edges or surfaces.
- Place bends and non-linear components on durable pallets, use proper lifting and hoisting equipment.

Installation

The placement of GFRP bars is like that of other rebars. Following these guidelines will ensure the best results:

- GFRP bars must be held firmly during the pouring and setting of concrete.
- Always ensure bars do not float upwards and out of position during concrete placement and consolidation. If movement is detected, the pour should be halted whilst additional support or fixtures are added.
- GFRP bars is supplied free of materials that could compromise the bond, such as oils, dirt, or chemicals. If the bars become contaminated, they should be cleaned prior to installation to ensure best performance.
- GFRP bars can be used and tied in with steel bars. The same tying method as steel should be used to achieve best performance.
- Nicks, scrapes, and cuts that do not exceed 5% of the depth of the bar are acceptable. Beyond 5% we recommend replacement of the bar. Alternatively, a lap splice with the appropriate lap length either side of the damage may be applied.

Lapping

GFRP bars may be jointed with lap joints as shown on the plans. Unless otherwise shown on the plans, GFRP bars shall be lap spliced using a GFRP rebar of the same diameter. Lap lengths and bar cover should be as indicated on the Structural Plans.

Contact Us

Please contact your local office for any queries on handling, safety, and installation.

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