

# Maintenance & Repair Manual



HIGH PERFORMANCE COMPOSITE SOLUTIONS



# Maintenance and Repair Manual

Fibergrate fiberglass reinforced plastic (FRP) is corrosion resistant allowing for a very long service life. Our products are extremely low maintenance and typically do not require cleaning aside from personal aesthetic preference. Fibergrate FRP materials can easily be cleaned, and there are several different methods to do so.

This manual provides general instructions for cleaning and repairing FRP materials as well as the recommended tools and materials needed. The procedures described are for normal, periodic cleaning and minor repair. Choose the appropriate method listed below for your cleaning situation. Observe safety rules and wear the appropriate protective equipment, such as safety glasses, protective gloves, and aprons, while cleaning to prevent accidents or injuries.

This repair manual is a general guideline only intended for repairing minor damage of FRP components. FRP components with major structural damage may need to be replaced. Contact Fibergrate to determine if the FRP can be repaired or if replacement is needed and for assistance with all other repairs not listed in the manual.

## FRP Cleaning Procedure

1. A pressure washer is excellent for removing most types of soil to quickly and easily clean FRP configurations. To prevent damaging the FRP, the pressure washer should not exceed 2000 psi. When washing, keep the spray tip at least 12 inches away from the FRP.
2. A damp cloth, broom, or compressed air will remove most light to moderate dust or soil. Wipe, scrub, or blow off the dust.
3. Soap and water along with rags, a soft bristle brush, or a broom can be used to remove slightly heavier soil. Common household mild detergents should be used. Apply the soap and water then scrub.
4. Rinse with clean water.

## FRP Repair Procedure

### Scratches, Scrapes, and Scuffs

1. Clean the scratches. Employ necessary means to remove dirt and contamination without damaging adjacent areas.
2. Wipe the scratches clean with a rag dampened with acetone or denatured alcohol.
3. Allow to dry.
4. Lightly spray the scratches with a clear spray paint. Refer to Table 1 on page 3. Use number 9 from the list or an equivalent. The scratches should mostly disappear after sealing with the clear spray paint.

### Deeper Gouges

1. Clean the gouge. Remove dirt and contamination without damaging adjacent areas.
2. Wipe the gouges clean with a rag dampened with acetone or denatured alcohol.
3. Allow to dry.
4. Using an epoxy adhesive such as number 1 – 4 from Table 1 on page 3, mix Part A and Part B together and fill the gouge with the epoxy.
5. Allow the epoxy to cure.
6. Lightly sand the epoxy patch smooth.
7. Spray a light seal coat over the sanded smooth repair with clear spray paint from Table 1 on page 3. Use number 9 from the list or an equivalent as the spray sealer. The sanding marks and the repair area will mostly disappear after spray sealing with clear spray paint.

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## Non-Skid Grit Surface Repair

Small minor damages to the non-skid grit surface can easily be repaired. For repairing minor scratches and scuffs use the scratches, scrapes, and scuffs repair procedure on page 2. If the grit surface is damaged and the grit has been removed, follow the steps below to repair.

1. To repair a gritted surface, you will need to source some sand, epoxy adhesive (1-4 from Table 1 below), and spray paint to seal the repair. These materials can be purchased at your local hardware store. The sand or grit needs to be similar to the grit on the component being repaired. The spray paint also needs to be fairly close to the color of the component being repaired. See Table 2 below for some recommended spray paints.
2. Remove any loose grit around the edges of the damaged area and wipe clean with a rag.
3. Lightly sand the repair area to promote good adhesion.
4. Wipe the repair area clean with a rag dampened with acetone or denatured alcohol and allow to dry.
5. Mask off the surrounding area with masking tape.
6. Mix Part A and Part B of the epoxy and apply a thin coat to the repair area with a paintbrush or roller.
7. Sprinkle grit on the epoxy coated repair area until uniform coverage is achieved. Allow the epoxy to cure.
8. Lightly spray the repair with a matching spray paint to seal the repair. Keep the spray sealer to a minimum to avoid drawing attention to the repair. Spray only enough to cover the grit. Allow adequate dry time before allowing use of the component.

Table 1 - Retail Sealers and Bonding Products

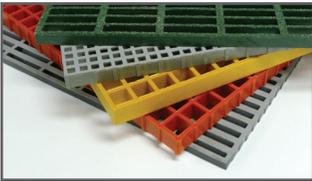
|    | Product                              | Manufacturer | Part #     | Unit of Purchase   | Recommended Service        | Typical Vendors                          | Application |      |
|----|--------------------------------------|--------------|------------|--------------------|----------------------------|--|-------------|------|
|    |                                      |              |            |                    |                            |  | Bond        | Seal |
| 1  | 2-Ton Epoxy                          | Devcon       | S-31/31345 | 25 ml dual syringe | Vi-Corr/VEFR, Corvex/ISOFR | Wal-Mart, Ace Hardware                   | X           | X    |
| 2  | 5 Minute Epoxy                       | Devcon       | S208/20845 | 25 ml dual syringe | Vi-Corr/VEFR, Corvex/ISOFR | Wal-Mart, Ace Hardware                   | X           | X    |
| 3  | Quick Set Auto Epoxy                 | Permatex     | QM-50A     | 25 ml dual syringe | Vi-Corr/VEFR, Corvex/ISOFR | Auto Parts Store                         | X           | X    |
| 4  | Quick Set Epoxy                      | Ace          | 18613      | 25 ml dual syringe | Vi-Corr/VEFR, Corvex/ISOFR | Ace Hardware                             | X           | X    |
| 5  | J-B Kwik                             | J-B Weld     | 8276       | 2 – 1 oz. tubes    | Corvex/ISOFR               | Wal-Mart, Ace Hardware                   | X           |      |
| 6  | Polyester Fiberglass Resin           | Bondo        | 402        | 1 qt., 1 gal.      | Corvex/ISOFR               | Wal-Mart, Ace Hardware, Auto Parts       |             | X    |
| 7  | Fiberglass Resin                     | Evercoat     | 498, 499   | 1 qt., 1 gal.      | Corvex/ISOFR               | Auto Parts Store                         |             | X    |
| 8  | Helmsman Spar Urethane Clear Spray   | Minwax       | 33255      | 11.5 oz. spray can | Corvex/ISOFR               | Wal-Mart                                 |             | X    |
| 9  | Painter's Touch Ultra Cover 2X Clear | Rust-Oleum   | 249087     | 11 oz. spray can   | Corvex/ISOFR               | Home Depot, Lowe's, Local Hardware store |             | X    |
| 10 | Crystal Clear Protective Coating     | Krylon       | 1301       | 11 oz. spray can   | Corvex/ISOFR               | Wal-Mart                                 |             | X    |
| 11 | Color Master                         | Krylon       | 51301      | 11 oz. spray can   | Corvex/ISOFR               | Wal-Mart                                 |             | X    |

Table 2 - Fibergate Touch up/Repair Spray Paints

The spray paints listed in the table below are fairly close matches to Fibergate standard colors. They are not exact, but can be used for small touch ups and repairs.

| Fibergate Color | Paint                              | Color Name            | Color Number |
|-----------------|------------------------------------|-----------------------|--------------|
| Green           | Krylon Farm & Implement            | John Deere/Case Green | 1817         |
| Light Gray      | Rust-Oleum Automobile Primer       | Light Gray Primer     | 2081         |
| Dark Gray       | Rust-Oleum Gloss Protective Enamel | Charcoal Gray         | 7784         |
| Yellow          | Rust-Oleum Gloss Protective Enamel | Sunburst Yellow       | 7747830      |
| Orange          | Krylon Engine Color                | Chevrolet Orange      | 2405         |

# Fibergrate Products & Services



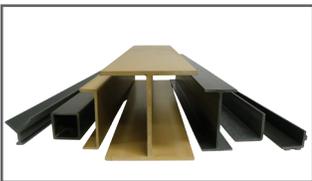
## Fibergrate® Molded Grating

Fibergrate® molded gratings are designed to provide the ultimate in reliable performance, even in the most demanding conditions. Fibergrate offers the widest selection in the market with multiple resins and more than twenty grating configurations available in many panel sizes and surfaces.



## Safe-T-Span® Pultruded Industrial & Pedestrian Gratings

Combining corrosion resistance, long-life and low maintenance, Safe-T-Span® provides unidirectional strength for industrial and pedestrian pultruded grating applications.



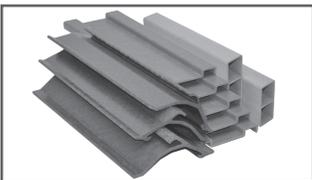
## Dynaform® Structural Shapes

Fibergrate offers a wide range of standard Dynaform® pultruded structural profiles for industrial and commercial use, including I-beams, wide flange beams, round and square tubes, bars, rods, channels, leg angles and plate.



## Dynarail® & DynaRound™ Guardrail, Handrail & Ladder

Easily assembled from durable components or engineered and prefabricated to your specifications, Dynarail square tube and DynaRound round tube railing systems and Dynarail safety ladder systems meet or exceed OSHA and strict building code requirements for safety and design.



## Custom Composite Solutions

Combining Fibergrate's design, manufacturing and fabrication services allows Fibergrate to offer custom composite solutions to meet our client's specific requirements. Either through unique pultruded profiles or custom open molding, Fibergrate can help bring your vision to reality.



## Design & Fabrication Services

Combining engineering expertise with an understanding of fiberglass applications, Fibergrate provides turnkey design and fabrication of fiberglass structures, including platforms, catwalks, stairways, railings and equipment support structures.



## Worldwide Sales & Distribution Network

Whether a customer requires a platform in a mine in South Africa to grating on an oil rig in the North Sea, or walkways in a Wisconsin cheese plant to railings at a water treatment facility in Brazil; Fibergrate has sales and service locations throughout the world to meet the needs and exceed the expectations of any customer.

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