

TECHGRIP™ FG1

MULTI-SUBSTRATE PRIMER

DESCRIPTION

TECHGRIP FG1 is a single-component adhesive primer used to adhere TECHTHANE[®] elastomers to epoxy, fiberglass, composite, and with TECHTHANE 180 and 380, steel substrates. FG1 cures at ambient temperatures and provides a bond that generally exceeds the high strength of the TECHTHANE elastomer. FG1 may be applied by spraying, brushing, or dipping. In service at ambient temperatures, FG1 bonds are resistant to fresh and salt water, many chemicals, and other environmental conditions.

APPLICATION SUMMARY (See following sections for further information)

PROPERTY

Coverage, approximate	200 ft. ² /gal.(4.90 m ² /L)
Thickness Per Coat	2-3 mils (0.050–0.075 mm)
Coats Required	1
Recommended Coats	epoxy/composites: 1-2 steel: 2
Pot Life	indefinite (when covered and moisture-free)
Primer Recoat Window	1–48 hours @ 75°F (24°C) & 50% R.H.
TECHTHANE Application Window	30 minutes – 4 hours @ 75°F (24°C) & 50% R.H.
Thinning	30-40% with MEK or methylene chloride
Application Equipment	brush, roller, or spray

PROPERTIES OF LIQUID PRIMER

PROPERTY

Viscosity, Brookfield, cps/mPs @ 75°F (24°C)	20
Volume Solids, %	13
Flash Point, TCC, °F (°C)	> 200 (93)
Color	Blue-Purple
VOC (less exempt solvents), lbs./gal. (g/L)	4.50 (539)

APPLICATION INFORMATION

Equipment

TECHGRIP FG1 can be applied with a brush, roller, or standard airless spray equipment:

BRUSH/ROLLER: Brushes and rollers must be solvent-resistant and be able to evenly apply 2–3 mils (0.050–0.075 mm) of primer.

SPRAY: Equipment should be airless spray, with a minimum air:fluid pressure ratio of 10:1, and at 1,000 psi (6.90 MPa) or less offer a good spray pattern with 0.013" to 0.020" (0.30–0.50 mm) orifice spray tips, and be of non-aluminum construction. Equipment should have teflon packings, teflon or nylon hoses, and a 60 mesh (0.25 mm) outlet filter. A tip filter may be required for small tips.

Note: Equipment MUST be clean to spray primer. Contaminants such as oil or grease will interfere with the primer bond. Equipment should be well flushed with solvent prior to application of primer

SURFACE PREPARATION

TECHGRIP FG1 must only be applied to clean, dry, properly prepared surfaces as outlined below:

- 1) Detergent wash, steam clean, or waterjet to remove all contaminants such as dirt, oil, grease, release agents, and salts. Allow to completely dry.
- 2) Grind down all sharp edges to a 1/8" (3.00 mm) or greater radius.
- 3) Abrade surface as follows:

Fiberglass, Epoxy, Composite: Roughen surface with coarse grit sandpaper or lightly grit blast with fine media, removing the gloss and providing a roughened profile on all areas to be coated.

Steel (TECHTHANE 180, 380 only): Gritblast surface to a 'White Metal' blast (SSPC-SP 5 / NACE 1 / ISO Sa 3) with a 2-4 mil (0.05–0.10 mm) surface profile. Use only a sharp grit such as fractured slag or silica (Black Beauty, 10-14 mesh Ottawa silica, or equal). Note: Do not gritblast when the relative humidity is greater than 85%, when the temperature of the metal surface is less than 5°F (2.8°C) above the dew point, or when the surface may become wet before the primer is applied.

- 4) Sweep, vacuum, or blow away dust using ONLY perfectly-clean equipment. If dust remains, solvent-wash surface using ONLY perfectly-clean rags and perfectly-clean, non-filming solvents such as alcohol or MEK. Allow to completely dry.
- 5) Verify surface cleanliness by wiping a clean white cloth wetted with solvent across the surface. If any residue shows on the cloth, repeat solvent cleaning until cloths wipe clean.

Thinning

Thin TECHGRIP FG1 by 25-40% with MEK or methylene chloride to facilitate application, especially for spraying. Note that adding MEK will make FG1 flammable.

Application

BRUSH/ROLLER: Apply so that a thin coat evenly covers the entire surface to be lined. Avoid returning with brush or roller to areas coated longer than a few minutes, as the existing primer on the surface will quickly become tacky and stick to the bristles.

SPRAY: Apply so that a thin coat evenly covers the entire surface to be lined, beginning at the bottom and working up. Runs should be avoided and excess primer should be wiped or brushed from the surface. If the relative humidity drops below 50%, allow additional cure time.

Note: Do not apply FG1 when the temperature of the substrate is less than 5°F (3°C) above the dew point of the ambient air or when the surface may become wet prior to priming.

TECHTHANE Application Window

TECHTHANE elastomers may be applied to TECHGRIP FG1 as soon as it is tacky to dry and free of any solvent (typically 20-30 minutes at 75°F/25°C) and no later than 4 hours after priming. If the primed surface is not to be coated within the first 4 hours, an additional 4 hour application window can be achieved by applying an additional coat of FG1 up to 48 hours later. Note: High humidity levels (>80% R.H. @ 75°F/25°C) may shorten recoat windows. Adjust recoat times if applicable.

AVAILABILITY

1 gallon (3.8 L) and 5 gallon (19 L) pails.

SHELF LIFE / STORAGE

In unopened containers and in the absence of heat and moisture, TECHGRIP FG1 is good for 6 months.

Store containers tightly sealed in a cool, dry area that is protected from direct sunlight and large variations in temperature. Long-term storage temperature should not exceed 80°F (27°C). *TECHGRIP FG1 is moisture-sensitive - opened containers must be resealed immediately, and if the contents are not to be used within 6 hours, the container must be purged with nitrogen gas to prevent moisture degradation.*

SAFETY

Avoid overexposure by inhalation, eye contact, skin contact, or ingestion. To reduce inhalation potential, use only in well-ventilated areas that minimize exposure to product and wear proper respiratory protection. For indoor or confined areas, forced-air ventilation is required to draw vapor away. While working in confined areas such as enclosed or narrow tanks, fresh-air breathing equipment is required. In applications with adequate ventilation, chemical cartridge masks designed for organic vapors are acceptable when used in accordance with their guidelines. To avoid eye contact, chemical splash goggles must be worn. To avoid skin contact, impervious protective clothing must be worn. Wash thoroughly after application.

Refer to the Material Safety Data Sheet (MSDS) for further information prior to use of this material. MSDS available 24 hrs. at 888-TECHFACTS / (540) 667-2664 (MSDS # 520).

FOR INDUSTRIAL USE ONLY

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