



Application Guide

FORMULA FIVE® Mold Sealer

FORMULA FIVE® Mold Sealer is a premium high durability semi-permanent base coat designed for use on most mold or plug substrates including composite (FRP/GRP¹), aluminum, and steel. FORMULA FIVE® Mold Sealer seals the mold surface and fills micro-porosity to create a smooth high gloss surface. Recommended for most molding processes including contact molding, hand lay up, spray up, cast polymer, and closed molding. FORMULA FIVE® Mold Sealer is particularly recommended for use in new composite mold initialization, sealing reconditioned or repaired areas of previously seasoned molds, and as a base coat to optimize the performance of semi-permanent top coats. Also recommended as a mold sealer with sacrificial mold release systems such as wax, polymeric, spray or wipe on slip coat mold releases. Recommended application temperature is 70 °F (21 °C); do not apply to hot molds over 350 °F (177 °C). Suitable for molding process temperatures up to 500 °F (260 °C).

NOTE: The cross-linking resins used in FORMULA FIVE® Mold Sealer cure by hydrolysis (interaction with moisture in the atmosphere) and temperature. Recommended storage is in original containers tightly sealed avoiding extreme temperatures. Decant the amount of material expected to be used into HDPE containers with a positive closure just before use. Do not return air exposed release back into original container.

¹ FRP/GRP = Fiber Reinforced Polymer or Plastic / Glass Reinforced Plastic or Polyester

PREPARING THE MOLD SURFACE

FORMULA FIVE® Mold Sealer is ready to use as received - do not mix or stir. Do not dilute or mix with other products or solvents. Must be applied to a clean surface to perform properly. Clean mold thoroughly with FORMULA FIVE® Mold Cleaner according to instructions or, if necessary, by compounding followed by warm water/detergent wash and followed by FORMULA FIVE® Mold Cleaner. If release agents containing wax or silicone have previously been used on the mold, apply FORMULA FIVE® Wax Stripper according to instructions. For removal of styrene or heavy resin deposits, apply FORMULA FIVE® Mold Stripper according to instructions. Polish to desired level of gloss prior to application of FORMULA FIVE® Mold Sealer.

Use tape test at several places on molding surface to verify cleanliness. Use good quality 3/4 or 1 inch (18 - 24 mm) wide general-purpose masking tape such as Scotch® Performance Masking Tape 234. Always use the same tape so the feel of its standard removal becomes familiar. Apply a piece of tape about 8 inches (20 cm) in length and burnish to the mold. Pull the tape up at a 90-degree angle to the surface. When testing a mold surface that has properly applied mold release, very little resistance should be felt. Perform tape test at different areas of mold to ensure cleanliness or proper mold release application.

DIRECTIONS FOR USE

FORMULA FIVE® Mold Sealer should always be used in a well-ventilated area with appropriate personal protection equipment, including solvent resistant gloves and eye protection.

Using a clean dry lint-free cloth or high quality paper towel, wet but not dripping with FORMULA FIVE® Mold Sealer, gently wipe mold surface covering up to 5 ft² (0.5 m²) at a time. Do not reuse cloths after drying as they will be contaminated with partially cured polymers that will cause streaking. Never pour mold sealer directly on mold. Reapply mold sealer to cloth frequently during application.

Observe area just treated with FORMULA FIVE® Mold Sealer, waiting approximately 20-60 seconds. Just before carrier solvent flashes off (becomes dry) lightly dust wipe or fly-wipe to redistribute the polymer. Do not wipe hard or wipe totally dry and do not polish at this point. The wipe-off step is essential to help the sealer cure evenly with reduced haze or streaking. If minor streaking remains after last coat is dry use a clean dry microfiber cloth to polish lightly.

Repeat on neighboring areas, overlapping to ensure complete coverage, until mold surface is completely covered. After solvent carrier dries allow 20 minutes for mold sealer to cure. Apply at least one additional coat of FORMULA FIVE® Mold Sealer following the same procedure and allow 30 minutes final cure time before applying FORMULA FIVE® Glossy Top Coat, FORMULA FIVE® Matte Top Coat, or other mold releases. Best practice for new, reconditioned or repaired areas of previously seasoned molds is to apply three coats of mold sealer, allowing 30 minutes cure time for each coat and a final cure time of 60 minutes or overnight.

FORMULA FIVE® Mold Sealer will perform very well at application temperatures of 70 °F (21 °C) and above, but curing by heating at temperatures above process or part resin exotherm temperature makes a more durable release base coating. Longer curing times between mold sealer coats and for final cure will also make a more durable base. Spray application may be used with FORMULA FIVE® Mold Sealer. Spray in thin coats; wipe-off is still required following the procedures above to reduce hazing or streaking.

FORMULA FIVE® Mold Sealer is packaged in 1 gallon (3.79 liter) jerricans.