



Application Guide

FORMULA FIVE[®] Glossy Top Coat

Semi-Permanent Mold Release

FORMULA FIVE[®] Glossy Top Coat semi-permanent mold release is a high gloss external release agent that is applied using a simple wipe-on leave-on application and produces very little mold build up. Formulated from a proprietary blend of cross-linking polymers in a solvent carrier, FORMULA FIVE[®] Glossy Top Coat bonds to the mold surface to protect the mold and preserve fine detail, yields multiple releases per application, has excellent chemical resistance, and withstands extreme processing temperatures. Ideal for high production open molding operations and applications where transfer of release agent to finished part must be avoided. FORMULA FIVE[®] Glossy Top Coat is designed to release gel coated polyester, vinylester, or epoxy parts from most substrates, including metal or gel coated mold surfaces.

NOTE: The cross-linking resins used in FORMULA FIVE[®] Glossy Top Coat 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.

PREPARING THE MOLD SURFACE

FORMULA FIVE[®] Glossy Top Coat is ready to use as received with no mixing or agitation necessary. Do not dilute or mix with other chemicals or dilute. Use FORMULA FIVE[®] Glossy Top Coat only after mold surface has been thoroughly cleaned and prepared with FORMULA FIVE[®] Mold Sealer or FORMULA FIVE[®] Mold Sealer-S according to instructions.

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[®] Glossy Top Coat should always be used in a well-ventilated area with appropriate personal protection equipment, including solvent resistant gloves and eye protection.

FORMULA FIVE[®] Glossy Top Coat will perform very well at application temperatures of 70 °F (21 °C) and above, but curing at temperatures above process or part resin exotherm temperature makes a more durable release coating. Multiple coats and longer curing times between mold release coats before first part being made will also yield a more durable release coating. FORMULA FIVE[®] Glossy Top Coat may be applied to surface temperatures of 70 - 350 °F (21–177 °C). Rapid evaporation of carrier solvents will require spray application for mold surfaces at or above 130 °F (55 °C).

Using a clean dry lint-free cloth or high quality paper towel, wet but not dripping with FORMULA FIVE[®] Glossy Top Coat, gently wipe mold surface covering up to 5 ft² (0.5 m²) at a time. Never pour mold release directly on mold. Wipe away any pooling but do not over wipe or apply excess material. Reapply FORMULA FIVE[®] Glossy Top Coat to cloth frequently during application. Repeat on neighboring areas, overlapping to ensure complete coverage, until mold surface is completely covered. No buffing or polishing is necessary.

Allow 15 minutes after first coat has dried for the resulting film to cure. Then, using a fresh clean cloth or paper towel, repeat

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previous step three more times for a total of four protective coats. When final coat is dry, allow film to cure for at least 30 minutes at room temperature before proceeding with molding. Durability of mold release will be improved by allowing films to cure longer or by heat curing (e.g., at 140 °F (60 °C) for 15 minutes or by heat curing at temperatures above process or part resin exotherm temperature).

For best results, reapply one coat of FORMULA FIVE[®] Glossy Top Coat as described above after first, third, and fifth part have been de-molded and when molded parts begin to hesitate or stick upon release. Best practice for new or reconditioned molds or for repaired areas of previously seasoned molds is to first apply FORMULA FIVE[®] Mold Sealer or FORMULA FIVE[®] Mold Sealer-S according to instructions, followed by six coats of FORMULA FIVE[®] Glossy Top Coat, allowing 30 minutes cure time for each coat and allowing the final coat to cure overnight.

Hand wiping is the best application method for FORMULA FIVE[®] Glossy Top Coat, but the use of a spray mister bottle, soft solvent resistant brush, or foam applicator to apply to difficult to reach or highly textured areas or to very large molds is useful. After spray application of FORMULA FIVE[®] Glossy Top Coat, gently wipe over wet coating using a clean dry cotton cloth so that a thin wet film remains - *do not wipe dry*. This will help eliminate hazing caused by spraying that appears upon cure or streaking caused by release pooling on mold.

If streaking is observed after applying a coat of mold release, polish off with a clean cloth after cure. Streaking can be caused by applying too heavy of a coat of mold release or by applying with a cloth containing partially or fully cured release or other contaminants.

Use a clean cloth dampened with FORMULA FIVE[®] Glossy Top Coat to clean scuff marks and light styrene build up from mold surfaces and to touch up wear areas on mold between production cycles.

If resin scum is observed after de-molding a part, clean area using FORMULA FIVE[®] Glossy Top Coat and wipe away residue. Continue molding parts. If scumming persists, lightly clean area with FORMULA FIVE[®] Mold Cleaner and a Scotch-Bright[®] type pad, wiping away residue and reapplying one or two coats of mold release as described above. If scumming is chronic, clean mold with FORMULA FIVE[®] Wax Stripper according to instructions and then buff. Proceed by reconditioning mold with FORMULA FIVE[®] Mold Sealer or FORMULA FIVE[®] Mold Sealer-S and FORMULA FIVE[®] Glossy Top Coat according to instructions.

FORMULA FIVE[®] Glossy Top Coat is packaged in 55 gallon (208.2 liter) drums and 1 gallon (3.79 liter) jerricans.

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