



MR #7 MOLD SEALER

PRODUCT BULLETIN

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DESCRIPTION

MR #7 is a semi-permanent primer coating formulated to seal areas of micro-porosity in epoxy, polyester, or metal molds/tools, and protect their working surfaces. It also provides a highly compatible substrate for over-coating with any of the semi-permanent release agents, greatly enhancing the durability of the releasing interface, and extending the intervals between re-coating.

It is a single-component system of complex moisture-cure film-forming resins in a volatile solvent base. On application, the solvents evaporate leaving the resins to rapidly cross-link and polymerize using the moisture in the surrounding air. This cure mechanism is rapid at relatively low temperatures, and evolves a pore-free, micro-thin transparent film that is hard, durable, and thermally stable up to approximately 482°C/900°F.

PRODUCT FEATURES

- * Excellent control of micro-porosity in various mold types.
- * Effective protection of mold surfaces, and fine detail.
- * Easy application - rapid low temperature cure.
- * Single-component convenience, no mixing or pot-life.
- * No mold build-up, no transfer or migration.
- * No silicones or waxes.
- * Thermally stable at elevated temperatures.
- * Greatly enhances multiple release capability of release agents.
- * Helps prevent styrene emission.

APPLICATION AREAS

MR #7 is specified for use on virtually all mold types to provide a durable protective interface prior to the application of the release agent. This is particularly important during operations involving heavily filled resin systems, or highly abrasive closed-mold processes - RIM, RRIM, RTM, etc.

It is a highly effective sealer of micro-porosity in aluminum, polyester, and epoxy composite molds and tools especially during vacuum/pressure processes, or those involving low viscosity resins.

MR #7 can also be used to improve the molding surface of old marginal molds so that acceptable de-molded parts can be obtained and the working life of the tool extended.

TYPICAL PROPERTIES:

Appearance Clear Thin Liquid
Odor Typical Naphtha Solvent
Carrier Blend of Petroleum Naphtha's
Weight/Gallon 7.13 lb/gal
Flash Point 32°-38°C/90°F
Cure Time (100°F) Full Cure within One (1) Minute After Carrier Solvent Evaporation
Shelf Life (in original unopened containers)..... 2 years

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HANDLING & STORAGE:

This product contains flammable/combustible solvents. Do not store at elevated temperatures or near heat/sparks or other ignition sources. Product is moisture sensitive. Keep container tightly closed when not in use.

PROCESSING GUIDELINES:

Mold Preparation: For best results it is essential that the mold surface to be treated is clean, completely dry, and free of traces of prior release agents, sealers, lubricants or other contaminants.

To remove old cured semi-permanent release films or other stubborn baked-on residues which are impervious to solvents, the use of 2000 grit sanding cloth wetted with MR#7 is recommended. This will remove all such contaminants and leave a highly polished surface that, as an added benefit, will also be activated and prepared for the application of the sealer MR#7.

MR#7 is easily applied at ambient or slightly elevated temperatures by wiping, brushing or spraying. In all cases, apply a thin, wet, continuous coat to a small section of the overall mold surface, then while still wet, gently buff the film with clean, dry, lint-free cotton cloth until the surface is completely dry. Continue this procedure until the entire area has coated, then repeat until a total of 2-3 coats have been applied. When the final coat is completely dry, the whole surface can be lightly buffed with a clean cotton cloth to remove any streaks or haze. The mold will then be ready for treatment with the appropriate release agent (MR#10).

To treat micro-porosity, it is recommended that the mold be pre-warmed to approximately 60°C/140°F prior and during treatment with MR#7. The sealer should also be applied to the bottom and sides of the mold to prevent vacuum leaks, when warranted.

Release performance is dependent on maintaining a continuous film on the mold surface. Abrasion during processing cycles will gradually disrupt the film and cause a noticeable reduction in ease of release. When this occurs, simply re-apply another coat of release agent using the above procedure, and when dry, continue operations. Re-application of the sealer is only necessary if the mold is stripped or damaged, or evidence of leakage during vacuum processing is noted.

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