



PLASTICS RESEARCH LABORATORIES, INC.
MOLD RELEASES & PROCESS ADDITIVES

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Technical Data Sheet



800

Product Description

External mold release: An air-drying reactive resin solution that cures to provide a durable semi-permanent coating. Permits multiple releases without transfer at both ambient and elevated temperatures.

Composition

Proprietary resin solution comprising modified siloxane-based polymers which crosslink and form a release film upon evaporation of the solvent carrier.

Handling

MOISTURE SENSITIVE. KEEP TIGHTLY SEALED.
Minimize exposure to atmosphere.
Do not return exposed material to can.
Store above freezing and below 100°F / 38°C.
DO NOT DILUTE

CAUTION: Do not apply to hot molds (over 300°F/148°C)

Features

Easy, wipe on
No wipe off or polishing required
High Gloss
HAPs free

Uses

Ideal for RTM and closed molding on heated tools for "A" side parts that require class "A" finishes. Also excellent for open molding applications where a slower evaporating mold release is desired.

Molding polyester, vinyl ester & epoxy.

Typical Properties

Effective Ingredients	1-2%
Color	Straw
Specific Gravity	0.754 @25°C
Flash Point	120°F / 49° C (C.O.C.)
Shelf Life	12 months in unopened/original container
Solvents	Aliphatic Hydrocarbons

Mold Preparation

New & Green FRP Molds:

Read AXEL publication FocusOn New & Green Molds.

Conditioned & Metal Molds:

Mold surfaces should be clean and free of previously used mold releases and other surface contaminants.

Application Instructions

Hand Wiping:

Apply with a clean, woven, lint free cloth, such as the Scott Shop Towels On A Roll®, Kimberly-Clark WorkHorse® rags or WypAll® wipes, or a heavy-duty plain white paper towel.

Wet the cloth with release until it is damp but not dripping. Wipe onto mold surface using smooth even strokes. Apply a thin, uniform coating and allow the release to evaporate. Do not overwork the area or continue to wipe. Simply wipe on, and allow to dry.

Spraying:

Some molders prefer to apply the semi-permanent release with a hand pump spray bottle. Using this method, a 2 – 3 square foot area can be misted and then lightly wiped with a clean cloth to distribute the release consistently across the surface.

1) When working on a large surface area, apply to one section at a time, working from one end of the tool surface to the other. Natural bristle brushes and most foam paint applicators can also aid in smoothing out the coatings or working them into textured or hard to reach areas. When working with sprayers or brushes, avoid pooling the release in any one area.

2) A minimum of 4 coats of release should always be applied to a clean well-conditioned tool. New & green tools should be handled with special care (see Focus On: New & Green Molds. At least 2 coats of S-19C sealer are recommended for new or reconditioned molds.)

3) Allow approximately 10 to 20 minutes for each coat of release to dry and cure before applying the next coat (warm tooling requires less time between coatings than ambient tooling). Low ambient temperatures (below 70°F / 20°C) may necessitate longer cure times.

4) Always use a fresh, clean cloth for each coat of release. If streaking occurs, replace your cloth with a clean one. Also make sure that the cloth is not too saturated, as heavy applications of release can streak (see FAQ's Semi-Permanent Mold Releases & FRP Molds). Most streaks can be removed by waiting for the release to cure and then lightly buffing the surface with a clean, dry cloth.

5) 30 minutes cure time after the final coat is applied is generally adequate. Once again, the longer you wait, the better.

6) To maximize productivity, a break-in procedure can be beneficial. A good method is to apply a light re-wipe of release to the mold surface following the first pull, another after the third, and another after the fifth part. It is also a good idea to do more frequent touch ups on sheer edges, radius areas, and high wear sections. This will improve release performance and provide the best protection for your tool.

* Due to the unique properties of this material, we require a clean closed application container. The container we find best suited, is a HDPE bottle with a shampoo squeeze style cap, where only a small amount of air is transferred. Gallons should be transferred into the type of container described above. At your request we can supply a sample and source. Drum quantity customers are required to use a desiccant drier attachment to assure proper release performance.

Maintenance

Reapply mold release as necessary. CX-500 cleaner may be used to remove minor buildup, which occurs during molding. Reapply 800 release after using cleaner. If excessive styrene buildup occurs use CX-525 styrene stripper followed by CX-500. Reapply mold release.

Troubleshooting

Semi-permanent mold releases are, by nature, extremely slippery. While XTEND 800 has been formulated to reduce incidence of pre-release, over application of release and weather conditions can impact pre-release. If over application of mold release coated surface has made the surface too slick, CX-500 cleaner can be lightly wiped across the surface to reduce the slip. Always tape test before and after doing this to assure that adequate release still remains on the surface.

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