



PLASTICS RESEARCH LABORATORIES, INC.  
MOLD RELEASES & PROCESS ADDITIVES

50 Cambridge Drive, Monroe, CT 06468

Phone: 718-672-8300 • Fax: 718-565-7447  
E-mail: info @axelplastics.com

[www.axelplastics.com](http://www.axelplastics.com)

## Technical Data Sheet



# 818

### 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

### Features

Easy, wipe on  
No polishing required  
High Gloss  
No HAPS

### Uses

Ideal for open molding, high yield applications such as tub/shower and boat hulls that require class "A" finishes. Molding polyester, vinyl ester and epoxy resin.

### If XTEND 818 is used for New or Green Molds:

Apply 2-4 coats of XTEND XTR mold sealer is recommended prior to application of XTEND 818.

### Typical Properties

Effective Ingredients	<2%
Color	Clear
Specific Gravity	0.720 @25°C
Flash Point	<73°F / <23°C (C.O.C.)
Shelf Life	12 months in unopened/original container
Solvents	Aliphatic Hydrocarbons Blend

### 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 paper towel, 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 paper towel with release until it is damp but not dripping. Squeeze the towel in to a ball to soak the 818 throughout the towel. 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.

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 brushes or pads, avoid pooling the release in any one area.

2) 3-4 coats of release are recommended for a clean well-conditioned tool. New tools and repaired area should be handled with special care (see Focus On: New & Green Molds. At least 2 coats of XTR sealer are recommended for repaired molds. )

3) Allow a minimum 15 minutes for each coat of release to dry and cure before applying the next coat. 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**

If sticking begins: Wipe the problem area of the mold with XTEND 818 to dissolve and remove residue. Continue molding. If the residue does not dissolve, lightly work over the tool with a Scotchbright® pad wet with XTEND 818, then apply one coat of release.

If build up persists: Wipe off with AXEL's CX-500 cleaner and a Scotchbright® pad. (This cleaner is designed to take off the residual buildup without removing the base coat of release.) Then wipe on 1 to 2 coats of XTEND 818, waiting 10 minutes between each coat.

In extreme scumming conditions (usually associated with closed molding applications): Strip the tool with CX-525 (a cleaner especially formulated to remove styrene build up), CX-200HS stripper and by buffing the tool. This will remove all scumming, buildup and the release. It will also condition the mold for break-in. Start from step 1 to recondition the mold.

Removal: Use CX-200HS, followed by a water wipe and a good general purpose cleaner, such as AXEL's CX-500.

The key to easy, consistent releases is maintaining molds through balanced use of release and cleaner. To further optimize the closed molding process we also recommend using an internal mold release.

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