



PLASTICS RESEARCH LABORATORIES, INC.  
MOLD RELEASES & PROCESS ADDITIVES

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## Technical Data Sheet



# 19MDR

### Product Description

External mold release. An air-drying reactive resin solution that cures to a cross-linked semi-permanent coating, which provides multiple release without transfer.

### 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 / 39°C.  
DO NOT DILUTE

### Features

Reduces scumming and buildup.  
Fast curing.  
No sealer required.  
Highly durable coating  
High slip coating  
HAPs free

### Uses

Ideal for SMC / RTM / Closed Molding where application temperatures are in the 100°F/38°C to 150°F/66°C range and processes that occur above ambient temperatures and less than 400°F/204°C with Modar™, Polyester, Vinyl Ester DCPD, Epoxy.  
Also suitable for natural + synthetic rubber + many polyurethane foams + elastomers.  
Extends life of RTV Silicone molds.

### Typical Properties

Effective Ingredients	3-5%
Color	Clear/pale yellow
Specific Gravity	0.730 @25°C
Flash Point	<73°F / <23° 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

- 1) Apply from a closed container\* 1 coat of XTEND 19MDR by wiping on. Wipe off any excess. Wait 15 minutes at temperatures 100°F or more. Allow 30 minutes or more at room temperature.
- 2) Apply 2 more coats of the XTEND 19MDR and wait for the corresponding time to dry/cure. Heating the release coated mold to a temperature that is 5-10 degrees higher than the process temperature or resin exotherm will significantly improve performance.
- 3) Mold one part.
- 4) Reapply one coat of release and mold another part (at this point, the release only needs to dry, which should occur within one minute). Continue molding. Reapply as needed.

\* 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 scumming or sticking begins: Wipe the problem area mold with XTEND 19MDR 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 19MDR, then apply one coat of release.

If scumming persists: Wipe off with AXEL's CX-525 cleaner and a Scotchbright® pad. (This cleaner is designed to take off the residual styrene buildup without removing the base coat of release.) Then wipe on 1 to 2 coats of XTEND 19MDR while heating the mold, waiting 10 minutes between each coat.

In extreme scumming conditions: Strip the tool with CX-525, CX-200HS 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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