

AXEL

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

Technical Data Sheet

XTEND™
Semi-Permanent Mold Releases

859

Product Description

An air-drying external mold release. It cures to a semi-permanent coating, which provides multiple releases without transfer.

Composition

Proprietary resin solution in aliphatic hydrocarbon solvent blend.

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

HVLP application
Fast and easy to apply
Gives high gloss for Class A finish parts
No polishing required
HAPs free

Uses

Specifically designed for composite molders who prefer to spray on mold release.

Typical Properties

Effective Ingredients	< 1%
Color	Clear
Specific Gravity	0.715 @25°C
Flash Point	<73°F / 23°C (C.O.C.)
Shelf Life	12 months in original unopened container
Solvents	Aliphatic Hydrocarbon 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.
AXEL XTEND XTR or AMS Mold Sealer should be used prior to spraying on AXEL XTEND 859 to provide the maximum performance and gloss/cosmetics for the mold surface.

Application Instructions

1) Immediately before molding, make sure that the mold is dust free. Spray 859 using a High Volume Low Pressure type spray gun, such as those by Binks, 3M AccuSpray, or Satajet. The release should go on wet without puddling.

Recommended settings when using a pressure pot:

Fluid Pressure – 3-12 psi
Atomizing Air Pressure – 35-55 psi
Fluid nozzle = 1.0-1.8mm (prefer 1.4)

2) Strokes should overlap slightly to assure complete coverage. Adjust air and liquid controls to provide a light, uniform film, the film should be visible as a wet coating for 6 – 12 inches behind the spray application. Keep the spray nozzle @ 6 – 15 inches from the mold surface. An air pressure setting in the 40 psi range should reduce any fogging effect. Adjust air and liquid controls to maintain a uniform spray pattern, lower air pressure produces a wetter film that is easier to see and may be useful in applying to more difficult areas of the mold surface. The spray gun itself should have the fluid knob set to ½ to 1 full turn open from the closed position.

3) Spray successive coats of release, working each coat at a right angle to the previous one to cover the entire mold surface. For those deep or complicated surface areas where spraying can be difficult we recommend wiping on 1 – 2 coats of 859. 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, followed by the spray application. It is always a good idea to wipe on the initial coat of 859 to assure even coverage of the mold surface.

4) 4-5 coats are recommended although new or porous tooling may require as many as 6 coats. Typically, 1 gallon of 859 will cover an area of 200 – 250 sq. ft on a seasoned mold. Allow each coat to flash dry before applying the next coat. It is always a good idea to apply an extra coat or two to high wear areas where shear forces or abrasion will most impact release performance. Following your final coat of 859 allow 30-60 minutes for the release to cure before using the mold. Hot and humid conditions can affect the drying time of the spray and may require adjustment of settings to insure a uniform spray.

5) When spraying a large mold that requires walking on the surface, apply the release to a section at a time.

6) Apply all of your coats and allow a minimum of one hour of cure time prior to molding.

Maintenance & Touch-up

Promptly touch-up any areas, which are difficult to release or subject to abrasion. If no residue is present, simply apply more XTEND 859. If there is minimal buildup, clean the mold by lightly wiping with a cloth that is just damp with Acetone (preferred) or CX-500 and then apply additional coats of release.

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