

# AXEL

PLASTICS RESEARCH LABORATORIES, INC.  
MOLD RELEASES & PROCESS ADDITIVES

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Technical Data Sheet

**XTEND**™  
Semi-Permanent Mold Releases

## XTEND W-1900 Part A & B

### Product Description

Two (2) part external mold release. An air-drying reactive resin solution that cures to form a cross-linked semi-permanent coating, which provides multiple releases without transfer. Semi-cosmetic.

### Composition

Proprietary resin solution in water emulsion.

### Handling

Shelf life of product is reduced after opening. Remaining product should be used as soon as possible.

KEEP TIGHTLY SEALED.

Minimize exposure to atmosphere.

Do not return mixed product back to the original containers.

Store above freezing and below 100°F / 39°C.

The mix ratio is 1:1. Mix well.

Pot life of mixed material is a maximum of 8 hours

### Features

Fast curing.

No sealer required.

Highly durable coating

Non-flammable

NO VOC's / NO HAPS / NO SOLVENTS

### Uses

Designed for use with various thermoset resins including epoxies, as well as natural and synthetic rubber and polyurethanes

### Typical Properties

Effective Ingredients	7-10%
Color	White Emulsion
Specific Gravity	1.00 @ 25°C
Flash Point	N/A
Shelf Life	12 months in unopened/original container
Solvents	Water-borne Emulsion

### 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

Mix the A & B sides together in a 1:1 ratio. Exact measurement is not necessary. May be applied by wipe on or by spraying.

### WIPE-ON APPLICATION

1) Wet 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 with release. 100%, bleached white, cotton can also be used (t-shirt style is preferred). *Wipe on application should only be done below 120°F/50°C. A spray on application should be used for temperatures above 120°F/50°C.*

2) Working in small areas, wipe on a smooth light film.

3) Allow to dry. Continue application until entire mold is coated. Can be buffed to a shine when applied at ambient – simply use a second dry paper towel or cloth to buff the wet surface.

### Cure and Temperature for Wipe-On Application

Apply 2-3 light coats depending on process and resin.

Cure Time in minutes	75°F/25°C Ambient	120°F/50°C	175°F/80°C	250°F/120°C
Between Coats	15	10	5	2
Final Cure	30	15	7	3

### SPRAY APPLICATION

1) It is suggested to use a new, clean, dedicated spray system when using XTEND W-1900.

2) Recommended Spray Equipment Setting:  
Pressure Pot Fluid Pressure 3-12psi (0.2-0.8 bar)  
Atomizing Air Pressure 30-55psi (2.0-4.0 bar)  
Fluid nozzle 1.0-1.8mm (prefer 1.4mm)

3) AXEL suggests the spray (fan shape) pattern be adjusted on cardboard or craft paper prior to spraying on the mold. Whenever possible, spray 9-15" (20-40 centimeters) from the mold surface. Air lines must be dry and contaminant free – AXEL requires using an oil/water filter on the air line just before the pressure pot or the spray gun.

4) Pressure pots, or airless gravity feed spray equipment is recommended. Venturi style spray systems or traditional gravity feed spray systems are not recommended. Pressure pots, or gravity feed cups containing previous

mold release agents will contaminate W-1900 making it ineffective; we suggest the use of a new or fully reconditioned gun. If a pressure pot is used, then AXEL recommends the use of a plastic liner. 1 quart/liter screw-on pressure pots are NOT recommended. 2 quart/2 liter or larger, with a gasket type seal is recommended.

- 5) Spraying should be done at approximately 1 yard/1 meter per second across the surface of the mold. The volume of mold release should not drip, run, or puddle at this speed of application. Typical fluid nozzle settings are .75, to a maximum of 2.0 full turns open from off.
- 6) Spray equipment should be thoroughly cleaned between uses. AXEL recommends flushing the entire system with AXEL CX-500, CX-501, or CX-502.

remove the CX-525 or CX-535, such as: CX-500, CX-501, or CX-502. Acetone can also be used in place of the CX-500/501/502 cleaners, but a more thorough cleaning must be done as acetone is less effective at removing residue than CX-500, 501 or 502.

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**Cure and Temperature for Spray-On Application**

Apply 2-3 light coats depending on process and resin.

Cure Time in minutes	75°F/25°C Ambient	120°F/50°C	175°F/80°C	250°F/120°C
Between Coats	15	10	5	2
Final Cure	30	15	7	3

**Break In**

Apply one coat of release after the first part. This will extend release productivity. A break in or conditioning coat ensures any mold areas not properly coated during application are sufficiently coated for expected release longevity/performance. Further, any leftover contamination from the cleaning process will usually be removed by the first part produced. Therefore, a touch-up coat after the first part helps to ensure complete mold coverage when contamination is removed during molding.

**Touch Up**

AXEL recommends reapplication after approximately 75-80% of maximum parts producible. For example, if during initial testing it is determined that 32 parts can be molded prior to the mold/part exhibiting some sticking or failure, then reapplication should occur sometime around the 24<sup>th</sup> or 25<sup>th</sup> part. This ensures that the mold release film is still fully functional during molding while minimizing the potential for build-up due to (potentially) applying the W-1900 too often.

\* Due to the unique properties of this material, we require a clean closed application container. For hand application, the container we find best suited is an HDPE bottle with a small opening that can be closed quickly (“flip top cap”). Gallons should be transferred into this type of container described above. At your request we can supply a sample and source.

**Maintenance**

In heavy scumming conditions, or for warm to hot molds (usually associated with closed molding applications): Strip the tool with CX-525 or CX-535 (a mold stripper especially formulated to remove resin and release build up). Re-apply mold release after use. For molds less than 150°F/65°C, a secondary cleaner should be used to