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Technical Data Sheet

XTEND® 820 Mold Release

Product Description: A Semi-permanent wipe on, leave on, mold release primarily used for composites.

Use: Ideal for open molding, high yield applications such as tub/shower, marine, nacelles, swimming pools, etc., that require class "A" finishes. Suitable for most thermoset resins and gel coats.

Composition: Proprietary resin solution in aliphatic solvent blend.

Handling: MOISTURE SENSITIVE. KEEP TIGHTLY SEALED.

CAUTION: Apply at ambient, or, ideally, above 65°F/18°C. Do not apply to hot molds over 350°F/ 177°C. Minimize exposure to atmosphere. Do not return exposed material to can. Store above freezing and below 100°F / 38°C. DO NOT DILUTE.

AXEL recommends either AXEL XTEND XTR or AMS Mold Sealer prior to applying XTEND 820 Mold Release.

Hand Application: 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 bleached white, 100% cotton cloth.

Note: As 820 is a Wipe On, Leave On application, AXEL suggests dusting the mold with a micro-fiber cloth prior to applying each coat.

Wet the paper towel with release until it is wet but not dripping. Gently squeeze the towel into a ball to soak the 820 throughout the towel. Wipe 820 on to the 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.

FEATURES

Wipe on, Leave on	No HAPS
No polishing	High Gloss

TYPICAL PROPERTIES

COLOR	Clear
SPECIFIC GRAVITY	0.720 @ 25°C / 77°F
VISCOSITY	< 15 cps @ 25°C / 77°F
SOLVENTS	Aliphatic Hydrocarbons
FLASH POINT	7° C / 45°F
SHELF LIFE	12 months in original, unopened package
PACKING	Steel cans

Mold Preparation

Mold surfaces should be clean and free of previously used mold releases, compounds, polishes and other surface contaminants. AXEL recommends a hot water wash and dry, and then use of a residue free Mold Cleaner, such as: AXEL CX-500, CX-501, CX-502, etc. In some cases, it may be necessary to use a Mold Stripper, such as AXEL's Aqua-Clean 220 to remove compounds or polishes that contain animal fats, silicones, or oils.

1. When working on a large surface area, apply to one section at a time, working from one end of the mold surface to the other. 820 can be applied in a straight line or in a circular motion. Care should be taken to have a small amount of overlap to ensure 100% coverage.
2. 3-4 coats of 820 are recommended for a clean, well-conditioned mold. New molds and repaired molds should be handled with special care (see Focus On: New & Green Molds. One to two coats of XTEND XTR or AMS Mold Sealer are recommended.
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 require longer cure times. At least a small amount of air movement is recommended to encourage solvent evaporation and cure.

4. Always use a fresh, clean cloth for each coat of release. If streaking occurs, replace your cloth with a clean one. Most streaks can be removed by waiting for the release to cure and then lightly buffing the surface with a clean, dry cloth or micro-fiber cloth.
5. 60 minutes cure time after the final coat is generally adequate. Once again, the longer you wait, the better. 60 minutes or more is recommended for below 70°F / 20°C or for difficult mold shapes/profiles.
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 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 an 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.

Spray Application

1. Immediately before molding, make sure that the mold is dust free. Spray 820 using a High-Volume Low-Pressure type spray gun, such as those by Binks, 3M AccuSpray, Schütze W3 FZ-Duo, 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 820. 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 820 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 820 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 820 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 820. 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.

Review SDS before use.