AXEL
PLASTICS RESEARCH LABORATORIES, INC.
MOLD RELEASES & PROCESS ADDITIVES

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Technical Data Sheet

XTEND®
Semi-Permanent Mold Releases

1140HS
Mold Release

Product Description
Proprietary resin solution comprising modified siloxane based polymers which crosslink and form a semi-permanent release film upon evaporation of the solvent carrier and cure of the polymer.

Composition
Proprietary resin solution in aliphatic solvent blend.

Handling
MOISTURE SENSITIVE. KEEP TIGHTLY SEALED.
CAUTION: Apply at ambient temperature, 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 100ºF / 38ºC.
DO NOT DILUTE.

Features
A wipe-on/wipe-off, all in one mold release.
No Sealer needed.

Uses
Especially suited for polyester resins, such as: Iso, ortho, DCPD, and PET, as well as vinyl-ester resins. Suitable for epoxies.

Typical Properties

Effective Ingredients	<3%
Color	Straw
Specific Gravity	0.72 @25ºC
Flash Point	<73ºF / <23ºC (C.O.C) TBD
Shelf Life	12 months in original unopened container
Solvents	Aliphatic Hydrocarbons
Odor	Paraffinic

Mold Preparation
Mold surfaces should be clean and free of previously used sacrificial mold releases (like paste waxes, fluoropolymer releases etc.) and other surface contaminants, like dust, dirt, compounds, polishes, over-spray, and residue from polishing or compounding.

Note: 1140HS Mold Release is compatible with most semi-permanent mold releases, and total stripping of molds is generally not required prior to applying 1140HS.

Application
Apply 2-4 coats of 1140HS allowing approximately 15-20 minutes between each coat. Allow a minimum of 30-60 minutes before molding.
New molds or porous surfaces may require additional coats. Increased cure times are recommended for mold temperatures below 68°F(20°C).

Good cure is also important when using new molds; molding resin with long cure times; or working over repaired areas. Air movement is recommended for high humidity environments while the 1140HS is curing.
New Molds, or porous molds (or porous repairs) may require one or more additional coats of 1140HS.

Application Method
1) Apply to ambient temperature molds by wiping with a clean, woven, paper cloth such as the Scott Shop Towels On A Roll®, Kimberly-Clark WorkHorse® rags or WypAll® wipes. 100%, bleached white, cotton cloths can also be used.

2) Work in patches, applying a smooth, continuous light film over an area approximately 4'-6' (0.3-0.8m^2) square, or a size that you can conveniently wipe before it dries. A wet coat should be applied, but without runs, puddles, or drips.

3) As the 1140HS starts to flash off (typically 3 seconds up to 3 minutes), use a clean, dry paper cloth, or cotton cloth to wipe the surface to a shine. This is done in three steps.
a) Starting from the outside of the wet-out area, and working towards the center, **wipe** over the area once. Then b) **flip** the cloth over to a dry side, and then c) wipe over the surface again using a hand **waving** motion. Firm, strong pressure is not necessary for a streak free, high gloss cosmetic (shine). It is recommended to wave or wipe off one to two times. If any streaks remain, stop wiping for 1-2 two minutes and allow the surface to dry further. Any streaks should now wipe off easily.

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4) If any streaks remain after application step #3, simply re-wet the streaked area with 1140HS Mold Release and wipe the area vigorously, then wipe off with a second, dry cloth.

Cure
Allow the coated mold to cure for 30-60 minutes minimum at ambient temperature before molding. Longer cure times should also be considered for new or repaired molds. Overnight cure for new molds is ideal.

Production
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, 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.

Maintenance
Light monomer/styrene build-up can be removed with a quick, light wipe of acetone. Then a light coat of 1140HS should be reapplied.

If build up persists: Rub dirty areas with AXEL's CX-500 or CX-501 cleaner and wipe off with a clean dry cloth. Follow cleaning by wiping on 2 or more coats of XTEND 1140HS, waiting 15 minutes between each coat. After 30 minutes, tape test to assure that the mold has been restored to good condition.

In extreme resin build-up 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, or by buffing the tool with compound or polish. This will remove most mold buildup and the release. It will also condition the mold for break-in. Start from step one to recondition the mold.

Removal
May be removed by abrading (polishing), or, if chemical removal is preferred, XTEND CX-200HS Mold Stripper or XTEND WCX water-based Mold Stripper are recommended.

* Due to the unique properties of this material, AXEL requires a clean closed application container. The container 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. DO NOT POUR MATERIAL FROM HDPE BOTTLE BACK INTO ORIGINAL GALLON CONTAINER. At your request, AXEL can supply a sample and source. Drum quantity customers are required to use a desiccant drier attachment to assure proper release performance.

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