

AXEL

PLASTICS RESEARCH LABORATORIES, INC.
MOLD RELEASES & PROCESS ADDITIVES

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Technical Data Sheet

XTENDTM
Semi-Permanent Mold Releases

W-4016

Product Description

Water-based semi-permanent mold release for all Rotational Molded polymers (except PC).

Composition

Aqueous emulsion of proprietary resins and cross-linkers with various surfactants, which crosslink and form a semi-permanent release film upon evaporation of the water carrier.

Handling

Keep this water-based product from freezing and store below 100°F / 39°C.
Mix/agitate well before using.

Features

Easy spray or wipe on
No HAPS
No odor

Uses

Specifically designed for **Rotational Molding** of polyethylene and polypropylene up to 1000°F/537°C. Especially good for medium to high slip for cross-linked P.E.'s.

Typical Properties

Solids	6.0 – 9.0%
pH	2.5- 4.5
Color	White
Specific Gravity	1.005 @25°C
Viscosity	<15cps @25°C
Flash Point	Non Flammable
Shelf Life	12 months in original unopened package

Mold Preparation

W-4016 can be applied over the top of most other rotational molding release agents. This is recommended when the mold surface is in good condition and cleaning or stripping is not necessary for the quality of the molded part. However, for longest lasting results, it is recommended to remove previous release agents prior to application and curing of the W-4016. AXEL CX-200HS Mold Stripper can be used to remove previous release agents. If media blasting or abrading the surface mechanically, the mold should be thoroughly cleaned with Mineral Spirits, and then AXEL CX-500 Mold Cleaner or acetone prior to applying the AXEL XTEND W-4016 Mold Release.

Note: The most common problem when poor release results after mold cleaning, is blast media left in the tool due to improper cleaning.

Application Instructions

Dry-cycle/Dry bake for new or stripped/clean tools:

Use a cotton cloth or industrial paper shop towel. Soak the cloth with release until saturated and wipe onto the mold surface using smooth even strokes until the film is uniformly dry without wiping marks. It is NOT recommended to wipe on to a very warm or hot mold. The mold release may also be sprayed on to an ambient mold. Wiping on is strongly recommended the first time the W-4016 is applied, especially for cast aluminum tools or any tool with a textured surface. If spraying, any drips, runs, or over-spray should be wiped to ensure an even coating. Do not spray or mist on to very warm or hot molds unless quality spray equipment with proper atomization is used.

FULL CURE: Multiple coats (2-3) are recommended to achieve proper results/performance. The first coat should be applied and allow to dry to the touch. Then apply the second coat and, for maximum longevity, dry-cycle the mold through the oven and cooling cycle. Once the mold has cooled to below 175°F/80°C a third coat of the W-4016 can be hand applied for very difficult to release parts. Allow to dry to the touch, and then load the powder and mold. If spraying on, the mold should be allowed to cool to under 140°F/60°C. A full dry cycle is not always necessary.

PARTIAL DRY CYCLE FOR MODERATE PARTS:

For molders with (semi) independent arms, the arm can be moved in for a few minutes to heat through for a minimal cure (after two coats have been applied), and then brought back out to load the powder, close, and place back in the oven.

NO CURE: W-4016 has also been proven to work on new molds and newly media blasted molds without any dry cycle. Once properly cleaned, simply apply two coats by hand and allow to dry to the touch between coats and after the second coat. The powder can then be loaded and molded. Although long term performance may be reduced, the W-4016 will provide excellent release even when no heat cure is completed.

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Seasoned Tools with previous release agents:

For molds that are not stripped of previous mold release, one to two light coats can be applied to the mold and allowed to dry. It is not necessary to dry-cycle the mold if the mold/tool is seasoned with mold release. W-4016 will work right over the top of most other release agents. Just a light coat, when necessary, is all that is needed.

Touch-up coats can be applied as needed depending on part geometry, size, tooling, etc. No cure time is required for touch-up coats, however, the W-4016 should be dry to the touch.

NOTE: The W-4016 performs best when wiped on ambient or warm molds or sprayed (and then wiped in to the surface) on ambient molds (preferably below 140°F/60°C). Application on hot molds should be avoided, especially when spraying. The exception to this is when spraying with high quality spray equipment, such as: HVLP or similar equipment.

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