

ReleaSys™ DF DryFilm Mold Release Agent

Description:

ReleaSys™ DF solvent-based, dryfilm mold release agent designed to provide superior surface adhesion and wear resistance. Miller-Stephenson's exclusive surface activation chemistry and fluoropolymer resins allow for unmatched durability, maximal releases per application, and zero transfer. ReleaSys™ DF is ideally suited for epoxy, plastic, composite, and rubber applications. This product contains zero chlorinated or hydrocarbon solvents, making the product safe for use on rubber, plastics, and silicone substrates without fear of degradation or surface marring. Our proprietary low VOC, fast drying carrier fluids allows for easy application of thin-films via spray or dip applications methods. ReleaSys™ DF is particularly effective for cold molding operations which require a dryfilm release agent. ReleaSys™ DF is a very forgiving system providing release of nearly any substrate off any molding surface. ReleaSys™ DF will not interfere with post-production finishing operation. Benefits of this product include:

- PTFE Dry Film Release System
- Highly durable, thin-film coating
- Unmatched release of Epoxy, Plastics, Rubber, and Composite Substrate
- Safe for direct application to Rubbers and Plastics
- Zero chlorinated or hydrocarbon solvents
- Non-Silicone, Non-Wax, Non-Oil

Release Agent Applications:

Our specialized chemistry can be used to release the following materials:

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|-------------|------------------|
| • Plastics | • Rubbers |
| • Resins | • Phenolics |
| • Acrylics | • Polycarbonates |
| • Urethanes | • Polystyrene |
| • Nylons | • Elastomers |

Recommended Application Procedure:

1. Clean mold surface thoroughly. Mechanical cleaning such as bead media blasting, followed by chemical cleaning, provides the best surface for application. Removal of all previous mold release agent and contamination is critical.
2. Lightly agitate ReleaSys™ DF prior to and during use to disperse settled material. Apply approximately 8-12 inches away from a non-heated mold surface and apply a light coat of ReleaSys™ DF.

NOTE: Material will apply wet and transparent but will dry to a fine-white coat.

3. Allow solvent to dry completely before molding any parts. NOTE: Allowing the product to completely dry is critical for final film performance. Failure to do so will result in lower release performance and poor film strength.
4. Although it is not necessary to heat ReleaSys™ DF, performance can be enhanced if a heating cycle is completed prior to operation. This will ensure the most effective coating for durability and cycle life
5. If overapplication is suspect, the excess material can be removed by gentle wipe the surface with a non-abrasion soft cloth.

Reapplication:

1. When release becomes hesitant, reapply one coat of ReleaSys™ DF in the same manner as described previously.

Fused Coatings Procedure (Optional)

1. After applying the release agent, heat the surface to 581°F - 600°F. Measure the surface temperature directly with a thermocouple.

Note: Proper ventilation is critical during this step, only perform this action in an actively ventilated booth/area. Proper safety equipment should be use.

2. A change in coating appearance from an opaque white to a translucent color will occur. Maintain the temperature of the coated surface for 5 to 10 minutes. If you overheat the coating it will degrade and turn brown.
3. If a white residue is left on the metal surface, buff with a soft cloth. When the coating is properly fused, it is extremely durable.
4. PTFE has now been fused coated onto your mold surface. It is recommended that a routine (non-fused) coating of ReleaSys™ DF be applied as needed to achieve optimal release and consistency.

Physical Properties:

Primary Polymer:.....Fluoropolymer
Appearance:.....White Dispersion
Odor:.....Alcohol
Specific Gravity:..... 0.81 g/mL @ 25°C

Storage and Handling:

ReleaSys™ DF should be stored in a well-ventilated area which is cool and dry. Do not expose to freezing temperatures. Prior to use, container should be lightly agitated.

ReleaSys™ DF should not be used at temperatures above 260 °C or near open flames. Chemical breakdown will occur which will result in the generation of toxic fumes. When spraying, avoid inhalation of mist and exposure to skin. Always wash hands after handling. **Safety Data Sheet (SDS) is available upon request.**

Shelf-Life

ReleaSys™ DF has a shelf life of 12 months from the date of shipment.

LIMITATION OF LIABILITY AND REMEDIES: Manufacturer warrants that, at the time of shipment by the Manufacturer, this product is free from defect in material and manufacture. If the product is proved to be defective, the exclusive remedy, at Manufacturer's option, shall be refund of the purchase price or replacement of the defective product, provided written notice of the defect is given no later than one year after the date of shipment by the Manufacturer. Manufacturer shall not otherwise be liable for loss or damages whether direct, indirect, incidental or consequential, regardless of the legal theory asserted, including negligence and strict liability. **Manufacturer expressly disclaims all implied warranties, including the implied warranty of merchantability and the implied warranty of fitness for a particular purpose. There are no warranties which extend beyond the description on the face hereof.**

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