miller-stephenson

Product Information

www.miller-stephenson.com

ReleaSys™ HTX-WBN
High Temperature Dry Film Lubricant

Description

Miller-Stephenson has developed a high-temperature industrial coating designed to provide exceptional release agent / dry lubricant properties utilizing next-generation ceramic chemistry in water-based, VOC-free formulation. Our advanced chemistry and next-generation binder system allows the ReleaSys™ HTX-WBN to develop an ultra-durable, thin-film coating on any metallic, ceramic, glass, or composite surface. Our unique coating imparts a low coefficient of friction, high lubricity, and chemical barrier while providing high cost-effectiveness and a significant increase in die/mold lifetimes. The cured coating offers exceptional release properties, even at 600-700 °C, and superior protection from aggressive environments. The inert and non-wetting nature of the ReleaSys™ HTX-WBN make it an excellent surface coating for molds used to produce castings of light metals such as magnesium/aluminum. ReleaSys™ HTX-WBN can inhibit corrosion and chemical attack in metal forming, glass-making and sintering processes, thereby increasing die life and improving product quality. Benefits include:

- Next-Generation Ceramic Hybrid Technology
- Exception Dry Film Lubrication and Release Properties
- Exception durability and surface adhesion
- Unmatched protection of die/mold surfaces
- Fast-Drying, Ultra-Thin Film Coatings
- Low coefficient of friction
- 100% VOC free; ultra-low odor
- Water-based formulation

Applications

- Mold Release for High Temperature and Difficult to Mold Polymers and Composites
- Mold Release for Casting Metals or Metal Forming
- Mold Dressing for Powder Metal Processing
- Surface Coating for High Temperature Surfaces
- Barrier Coating for Aggressive Environmental Processes
- Specialty Lubricant for Drawing and Working Metals
- High and Low Temperature Dry Film Lubricant

Recommended Application Procedure

1. Clean surface thoroughly. Mechanical cleaning such as bead media blasting or steel wool, followed by chemical cleaning, provides the best surface for application of ReleaSys™ HTX-WBN. Removal of all previous contaminates is critical.

2. **Mix product thoroughly before use and intermittently during use to maintain uniformity.**

3. ReleaSys™ HTX-WBN is ideally applied via spray application with either an airless or air spray gun system to room temperature or ideally, a warmed mold surface. Application via brush or mop is possible but may require effort to ensure smooth, even coatings

   NOTE: Application of thin coats is critical. Allowing each coat to dry completely before reapplication.

4. Thick coats will cause “mud cracking’ and loss of surface adhesion resulting in poor cure film properties and poor release characteristics.

5. Allow coating to dry completely before use. Application to heated surfaces will cause drying/curing to occur quickly typically in < 1 minute.

6. The coating will dry to an ultra-thin white coat which will have be highly lubricious and non-stick. If this does not occur ensure the coating was applied in smooth, light coats and allowed to dry completely. In some cases, lightly buffing the surface can help smooth the dried coating. If you continue to have issue contact a Miller-Stephenson Technical Support Representative.

Physical Properties:

Primary Polymer	Ceramic particle blend
Appearance	White particle dispersion
Odor	None
VOC	None
Specific Gravity	1.0 g/mL @ 25°C
pH	6.5 - 7.5
Coverage	10 – 20 m^2/kg
Viscosity	150 - 175 cps

Storage and Handling:

ReleaSys™ HTX-WBN should be stored in a temperature controlled area which is cool and dry. Do not expose to freezing temperatures. Prior to use, container should be lightly agitated.

Shelf-Life

ReleaSys™ HTX-WBN has a shelf life of 12 months from the date of shipment Safety Data Sheet (SDS) is available upon request.

ReleaSys™ Product Line:

Miller-Stephenson offers a selection of high performance, semi-permanent release systems to meet your mold process needs. All variants of the ReleaSys™ Series will deliver higher productivity, lower rejection rates, and higher quality products.

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