

ReleaSys HTX-A Boron Nitride Release Coating

Description

Miller-Stephenson has developed a high-temperature industrial coating designed to provide an unmatched high temperature release agent utilizing fine particle hexagonal boron nitride in a nonflammable, aerosol formulation. Utilizing our advanced chemistry and next-generation binder system, ReleaSys HTX-A develops an ultra-durable, thin-film coating on any metallic or ceramic surface. This coating imparts a low coefficient of friction, high lubricity, and high adhesion ceramic film to surfaces. The cured coating offers exceptional release properties, even at 1000°C, and complete protection from aggressive environments. The inert and non-wetting nature of the coating make it an excellent surface coating for molds used to produce castings of light metals such as magnesium and aluminum and for coating surfaces in glass making operations. ReleaSys HTX-A can inhibit corrosion and chemical attack in metal forming, glass-making and sintering processes, thereby increasing die life and improving product quality. Benefits include:

- High Temperature Stability up to 1000°C in air; 1800°C in Inert Atmospheres
- Exception durability and surface adhesion
- Ultra-High Performance Ceramic Coating
- 100% Non-flammable formulation

Applications

- Mold Release for High Temperature and Difficult to Mold Polymers and Composites
- Mold Release for Casting Metals
- Mold Dressing for Powder Metal Processing
- Surface Coating for High Temperature Surfaces
- Barrier Coating for Aggressive Environmental Processes

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-A. Removal of all previous contaminants is critical.
2. Invert can and shake vigorously for one minute, Apply approximately 4-6 inches away from surface, and apply a light coat.
3. **Make sure to shake can frequently during use, failure to do so will affect coating thickness and final performance.**

4. Material should be applied wet and allowed to dry to a fine-white coat. Application to a cool surface is critical.
5. A second light coating is recommended to guarantee complete coverage. The second coat should not be applied until the first coat has fully dried.
 - a. **Multiple coats can be applied, however excess application can lead to transfer into your molded part**
6. Allow solvent to dry completely. Molding can be performed without heat curing the coating. **For improved adhesion, durability, and elimination of transfer, heat curing is recommended.**

Heat Curing Procedure

1. To heat cure, bring the dried coating up to a maximum of 200°F and hold for 10 minutes. Cool back to room temperature.

Physical Properties:

Primary Polymer:.....Discrete Ceramic particle
Appearance:.....White particle suspension
Odor:.....Slight
Specific Gravity:.....1.3 g/mL @ 25°C

Safety Data Sheet (SDS) is available upon request.

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