

ReleaSys™ SMC-AK Surface Modifying Coatings

Description:

ReleaSys™ SMC-AK is a solvent-based, 2K coating designed for surface modification and Self-Assembling Monolayer (SAM) research. ReleaSys™ SMC-AK are proprietary blend of triethoxysilanes that will dramatically change the surface characteristics and contact angles of surface in which it is applied to. Our coatings will develop hydrophobic and oleophobic properties on most surfaces. The ultra-low coefficient of friction provides excellent flow out and superior release ease, specifically in complex applications. The highly efficient coating is extremely resistant to fouling and build-up, yielding longer operational timeframes, higher throughput, and lower defect rates. Properly applied, our product develops a durable, thin-film on the surface with zero build-up or loss of optical clarity. Our coating will not change the surface appearance of coated substrate. Due to its ability to bond and seal surfaces it is also a highly effective corrosion barrier and surface sealer for metallics, architectural stone, and glass. Benefits of this product include:

- Exceptional durability and surface adhesion
- High lubricious release coating
- Superior Release and Self-Cleaning Properties
- Ideal for Glass, Metal, Concrete/Architectural Stone and Plastic Surfaces
- Rapid Drying; Low Odor
- 100% Optical Clarity

Application Process

1. Clean surface thoroughly. Mechanical cleaning such as bead media blasting, followed by chemical cleaning, provides the best surface for application. If possible, plasma cleaning is recommended.
2. ReleaSys™ SMC-AK can be applied by dipping, hand wiping or spray application to a room temperature surface.
3. **Prior to application combine ReleaSys™ SMC-AK 1:1 with ReleaSys™ SMC Activator and mix thoroughly. Make sure all components are room temperature prior to mix.**
4. **Activation takes 35-60 minutes at room temperature. After this time, you can begin your application process**
5. **Hand wiping:** Apply to a microfiber cloth. Lightly apply a single coat to clean and prepared surface. Do not overlap your passes. Work quickly to coat the mold, apply only the lightest of pressure to the surface.
6. Allow product to dry completely. The surface can be washed with ethanol to remove excess material.
7. **MOVE TO CURE PROGRAM.**
8. **Spray application:** Apply a single coat, approximately 8-10 inches from the surface. Be sure to make even, light passes over the mold surface. Ensure all intended surfaces are wetted

9. Allow ReleaSys™ SMC-AK to dry completely. Multiple light coats can be applied but is not usually necessary.

Note: Prior to curing the surface can be washed with ethanol to remove excess material.

10. **MOVE TO CURE PROGRAM.**
11. **Dip Application:** Dip item to be coated into solution and slowly retract.
12. Submersion times of 1-10 minutes can be advantageous depending substrate and level of surface prep.
13. While not always necessary, after removing from the coating bath, the item can be rinsed with ethanol.
14. **MOVE TO CURE PROGRAM.**
15. **Cure Program:** Heat to 110°C for 30 - 60 minutes. Cooler and longer cure programs can be performed and should be evaluated if the coated substrate cannot handle the elevated heat cures.
16. **If heating is not an option, 24 hours at room temperature (65 - 75°F) is required**
17. The solution, once mixed, has a work-life of 12 hours, beyond this point potency and surface adhesion will begin to decrease rapidly.

Physical Properties:

Primary Polymer:.....Reactive Alkoxysilanes
Appearance:.....Clear
Odor:.....Ethanol
Specific Gravity:.....0.79 g/mL @ 25°C
Flash Point:.....80.6 °F

Storage and Handling:

ReleaSys™ SMC-AK 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™ SMC-AK should not be used at temperatures above 310 °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.

Shelf-Life

ReleaSys™ SMC-AK 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.**