TECHNICAL DATA SHEET

REPELFLEX® AM

TRANSPARENT ANTIMICROBIAL COATING FOR PLASTICS

OVERVIEW

RepelFlex® is a family of UV curable, flexible, hard coatings that are designed for a variety of substrates. RepelFlex® AM is designed specifically for the prevention of microbial growth, while at the same time providing a highly transparent, durable, scratch and stain resistant surface. The coating is extremely transparent, flexible and thin, and thus preserves the look and feel of original article. It is available in transparent hardcoat and matte soft-touch formulations. RepelFlex is the environmentally friendly option as it contains no solvent or fluorine and is a UV curable applicable for standard wet deposition methods.

APPLICATIONS

RepelFlex AM is a transparent coating designed to provide outstanding antimicrobial, anti-scratch and anti-stain protection to hard or soft plastic surfaces. Ideal applications include the following:

- Mobile device cases and accessories
- Fashion accessories (handbags, belts, wallets, watch bands, etc.)
- Applications where soft-touch haptics are required
- Artificial leather (automotive and aerospace seating, home and office furniture, etc.)
- Footwear
- High touch surfaces, especially public surfaces
- Other applications where the "invisible" protection against microbials and stains is required

TECHNOLOGY

The unique characteristics of RepelFlex AM result from a combination of proprietary polymers with distinct phases and properties. Balancing the ratio of these polymers is the key to enabling the unique characteristics of transparency, hardness, durability, and flexibility. RepelFlex AM is designed to be applied using simple atomized spray equipment followed by a rapid cure through the exposure to UV light. RepelFlex AM is formulated to be solvent and fluorine-free. Due to UV cure, the material will provide longer lasting durability of the AM features.

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Product Information
Product Description: RepelFlex AM is a solvent and fluorine-free, UV curable, transparent, flexible, hard coating for rigid and soft plastic surfaces.
Chemical Family: Organosilane
Room Temperature Physical State: Liquid
Storage Recommendations: Tight seal, prevent exposure to light and maintain 10° C – 45° C.
Shelf Life: 2 years

Material Characteristics
Target Coating Thickness (wet): Transparent: 1.0 to 3.0 um / Soft Touch: 5.0-35.0 um
Solvent-free
Fluorine-free
Antimicrobial Performance: Japanese Industrial Standard (JIS) Z 2801 – PASS* *as tested by Microchem Laboratory, Round Rock, TX
Static contact angle: Water 90-97° / Oil (Diiodomethane, CAS No. 75-11-6) 52-61°
Adhesion: ASTM D3359 - Cross Cut Adhesion Test: (5) - No de-lamination observed
Flexibility: ASTM D522 - Cylindrical Bend Test/Conical Mandrel – Pass Static Bending: (R = 5mm, 7 days @70°C) – No deformation or cracking observed
Anti-Stain: Resistant to common fluids (lotions, condiments, cosmetics, household cleaners, etc.)
Transparency: ≥ 90%

Application
Wet based deposition methods such as dip or wipe are acceptable. Atomized spray preferred.
UV curing is achieved at 1,100 to 1300 mJ/cm^2 using a standard class "H" lamp.
For some applications a short bake at 50-70°C is recommended prior to the UV cure step.

Handling and Storage
Follow good standard industry hygiene practices. Apply in a well-ventilated area. Wear appropriate personal protective equipment (PPE).
Avoid: Exposure to heat, flames, sparks and other sources of ignition
Store in tightly closed opaque containers under normal warehouse conditions.
Stable at normal storage temperatures and conditions for up to two years
See RepelFlex AM SDS for further information

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