



REPELFLEX[®] HC

SCRATCH RESISTANT COATING FOR PLASTICS

OVERVIEW

RepelFlex is a family of UV curable, transparent, flexible, coatings that are designed for a variety of materials. RepelFlex HC is designed specifically for application to plastics and provides a durable abrasion resistant hard-coat to plastic substrates. In addition to creating a hard scratch resistant surface, RepelFlex HC protects plastics against microbial growth and the accumulation of dirt and stains. RepelFlex HC is friendly to the environment as it contains no solvent or Fluorine and is UV curable.

APPLICATIONS

RepelFlex HC is designed to provide a hard scratch resistant coating to plastic surfaces while providing protection against microbial growth and dirt and stains. Ideal applications include:

- Mobile device cases and accessories
- Laptop and tablet cases
- Wearable electronics
- Personal Protective Equipment (face shields, goggles, protective barriers and films)
- Other consumer and industrial applications where scratch and abrasion resistance are critical

TECHNOLOGY

The unique characteristics of RepelFlex HC result from a combination of proprietary polymers with distinct phases and properties. Optimizing the ration and concentration of these polymers and additives is the key to enabling outstanding adhesion to most plastics and delivering the critical performance parameters; optical clarity, abrasion resistance, and the protection against microbials and stains. RepelFlex HC can be applied using simple atomized spray equipment followed by a rapid cure through the exposure to UV light and is formulated to be solvent and fluorine-free.



TECHNICAL DATA SHEET

Product Information
Product Description: RepelFlex HC is a solvent and fluorine-free, UV curable, flexible, soft touch coating for plastic surfaces.
Chemical Family: Organosilane
Room Temperature Physical State: Liquid
Storage Recommendations: Prevent exposure to light and maintain 10° C – 45° C.
Shelf Life: 1 year

Material Characteristics
Target Coating Thickness (wet): 15 to 25 microns
Transparency: $\geq 90\%$
Microbial Resistance: Passes JIS Z 2801 for S. Aureus and E Coli (>99.95% reduction)
Pencil Hardness: H to 3H depending on coating thickness and underlying substrate
Static contact angle: Water 91-95° / Oil (Diiodomethane, CAS No. 75-11-6) 60-70°
Adhesion: AHCM D3359 - Cross Cut Adhesion Test: (5) - No de-lamination observed
Flexibility: AHCM D522 - Cylindrical Bend Test/Conical Mandrel – Pass
Static Bending: (R = 5mm, 7 days @70°C) – No deformation or cracking observed
Resistant to common fluids (lotions, condiments, cosmetics, household cleaners, etc.)
Fluorine-free
Solvent-free

Application
Wet based deposition methods such as dip or wipe are acceptable. Atomized spray preferred.
UV curing is achieved at 1,000 to 1,300 Joules/cm ² using a 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 one year
See RepelFlex HC SDS for further information

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NBD Nanotechnologies, Inc. 99 Hayden Avenue, Suite 400A Lexington, MA 02421 USA