

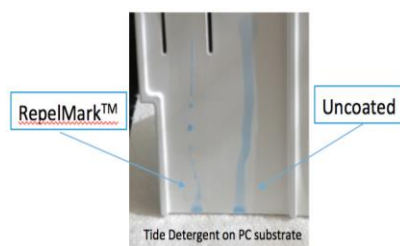
REPELMARK™

ULTRA REPELLENT HARD COAT



OVERVIEW

RepelMark™ is an epoxy functional hard coating that can be applied to plastics, metals, and fabric material. This coating has a unique chemical structure that combines two diametrically opposed characteristics that can be cross-linked via thermal curing. RepelMark™ is a unique hard coat that provides superior durability via the cross-linking design which allows for low surface energy surfaces molecules to be air interfacing which allows for the superior repellency to water, oils, detergents and permanent markers.



TECHNOLOGY

RepelMark™ is the result of using a unique chemistry formulation technique that manipulates different chemical groups. This is accomplished by using commonly known crosslinking epoxy based thermal cure functionalities combined into NBD's molecular structures. By utilization of NBD's structures, by simply adding a cure agent, the crosslinking achieves the creation of the

RepelMark™ coating with characteristics there were previously not possible.

TECHNICAL SPECIFICATIONS

Chemistry
Chemical Family: Organosilane
Room Temperature State: Liquid, Cure agent is separate liquid to be added before application
Storage Recommendations: Amber Glass Bottle, 10° C – 35° C
Shelf Life: 1 year without cure agent, with cure agent 48 hours
Product Description: RepelMark™ Formulation is activated with a cure agent and applied via atomized sprayers followed by thermal cure at 65°C for 1 hour.

Material Characteristics	
Thickness: 250-400 nanometers	
Standard Organic Solvent Borne	
Crosslinking chemistry that is activated with a cure agent, followed by a thermal cure to evaporate solvent	
Static contact angle: Water: 110° Hexadecane (C16): 75°	
ASTM D3359 - Cross Cut Adhesion Test: (5) - No de-lamination observed	
ASTM D4145 – T Bend Test – 120° - Pass	
Transparency: ≥ 90%	
ASTM D3363 – Pencil Hardness Test: Glass Substrate – 4H @ 500G Load	
ASTM D2794 – Standard Test Method for Resistance of Organic Coatings to Impact – 1KG - PASS	

Appliance
Within 48 hours of application, introduce cure agent
Spray preferred in ventilated area, other wet based deposition available: dip, draw down, or spin coat
Thermal Cure – 1 hours at 65°C (no humidity requirement)

Handling
Chemical Stable at normal temperature and storage conditions, formulation dispersed in organic solvent
Avoid: Heat, flames, sparks