

TECHNICAL DATA SHEET SHIELDS UP

Shields Up self-crosslinking, polyurethane dispersion is a water-based product that is intended to produce nondiscoloring, high-performance, protective top finishes for metal, rigid plastics and wood. Primers for these types of substrates also may be formulated with use of Shields Up urethane dispersion as part of the vehicle.

Optimum film properties can be achieved by drying coatings at ambient temperatures. Crosslinking of the polymer occurs during the drying cycle, and approximately a 90% level of the ultimate film properties can be achieved after overnight drying. After a 5 day cure period, Shields Up provides protection from graffiti damage from paint or markers. Graffiti damage can be removed from the Shields Up coated surface with Sculpt Nouveau's Graffiti Remover

Coatings based on Shields Up urethane dispersion have been found to exhibit exceptional resistance to abrasion, hydrolysis, oxidative discoloration, impact, solvents and staining.

RESISTS:

- Abrasion
- Hydrolysis
- Oxidative discoloration
- Impact
- Solvents
- Staining
- Yellowing & blistering
- UV & weather

USES:

- Interior/exterior copper, bronze & brass surfaces
- Lighting fixtures
- Architectural hardware
- Steel & Wood
- Architectural trim
- Terracotta & Concrete
- Buildings and walls

SURFACE PREPARATION: The life and quality of a coating depends greatly upon the preparation of the receiving surface. Surfaces to be coated should be dry and free of contaminants, moisture and oils. Careful selection of commercial metal cleaners is crucial because of the possibility of introducing harmful residues. Sculpt Nouveau's Metal Cleaner and Degreaser is the recommended cleaner. **NEVER USE ACETONE OR ANY TYPE OF SOLVENT FOR SURFACE PREP OR TREATMENT.**

The Shields Up and metal surfaces should be normalized to room temperature before use (70°F - 85°F). Use Sculpt Nouveau's Metal Cleaner and Degreaser before and after abrading the surface. Rinse well with water each time.

IMPORTANT NOTE: Unseen moisture may be on the metal surface, and in some cases, for example, on humid days, the coating can trap moisture underneath the film. This trapped moisture will manifest itself as a "cloudy" coating and/or create a possible bonding problem. Oxidation can occur as well over time. Such occurrence can be prevented by heating the metal surface with a heat gun or torch to remove surface moisture before applying. Apply the Shields Up to the warm surface or allow the metal to cool to room temperature. Use only white paper towels for drying. Never use blue towels or shop towels.

APPLICATION INSTRUCTIONS: Mix well. Apply 2 - 3 light coats, making sure the first layer of Shields Up saturates the rust or patina. If spraying, use a HVLP sprayer with a 1.2 tip at about 18 - 25 psi. The spray should look as though it is being atomized through a spray can. May also be applied with a brush or roller. Allow 1 hour to cure between coats.

PACKAGING: 16 oz, 32 oz, 1 Gallon, 5 Gallon

LATEX PROPERTIES:

Appearance	Translucent
Solids %	30
Particle Charge	Anionic
Particle Size	Colloidal
Surface Tension, dynes/cm	54
pH	7-9
Viscosity (Brookfield LV), cps @ 25°C	<75
Density (lbs/gallon)	8.7
Specific gravity at 25°C	1.05
Flash Point (°C Pensky-Martens closed cup)	>100 °C
Freeze/thaw stability	Passed 6 + cycles
Thermal stability (28 days @ 52°C	Satisfactory
Mechanical stability	Excellent
VOC, g/l by weight	2.25 lbs/gallon

TECHNICAL DATA SHEET SHIELDS UP

FILM PROPERTIES:

1. Application Properties of Films

Set to touch, minutes	10
Dry to touch, minutes	15
Dry Through, minutes	70

2. Physical Performance Properties of Dry Films

Hardness	
Pencil	F
Sward	48
Impact resistance, in lbs.	
Direct	160
Reverse	160
QUV weatherometer (aluminum, 500 hrs)	
Oxidation	No effect
Loss of gloss	No effect
Blistering	No effect
Yellowing	No effect
UV Stability (Fadeometer), hours	1,500
Untreated cold rolled steel	5B
Untreated aluminum	5B
Polycarbonate	5B
Rigid Vinyl	5B
Urethane (RM)	5B

3. Free Film Properties

Tensile strength, psi	6000
Ultimate elongation, %	70

4. Solvent Resistance, # Rubs Passed

MEK	>150
Cellosolve Solvents	>200

5. Hydrolytic Stability

8 hours at 15 psi in pressure cooker	Excellent; no loss
2 weeks at 70° C, (158° F), 95% relative humidity	Excellent; no loss

All tests were concluded on 1.0 to 1.5 mil films, air-dried for seven days at room temperature.

Storage and Handling:

Please refer to our Safety Data Sheet (SDS) at sculptnouveau.com
Shields up should be mixed well before use. Shelf life is one year.