



Technical Bulletin # 6918 **DF Solar Shield Clear**

UV Curable Screenprinting Inks

Polymeric has developed a non-yellowing Solar Shield Clear to protect overprinted colors from sunlight exposure. This clear contains UV inhibitors effective in preventing pigments from fading.

Duraflex Solar Shield Clear, when overprinted on standard DF colors, will endure 5 years of direct sun and element exposure without cracking, peeling or fading.

DF Solar Shield was printed on .010 polycarbonate and 2.5 mil, five year flexible white vinyl, through a 280 plain weave mesh. Both were cured with a 600 watt per inch Fusion D bulb at 60 feet per minute. Duraflex Solar Shield has been subjected to a battery of tests with the following results.

PERFORMANCE TESTING:

Crosshatch Adhesion	ASTM D3359 – Pass
Humidity	ASTM D4585 – 500 hours Pass
Adhesion after Humidity	ASTM D3359 – Pass
QUV Weathering	ASTM G154 – 500 hours Pass
Adhesion after QUV	ASTM D3359 – Pass
Chemical and Stain Testing <ul style="list-style-type: none">• Windex• Mr. Clean• Coffee• Tea• Coca-Cola	ASTM 1308 – 24 hours Pass
Heat Aging	500 hours at 190°F – Pass
Adhesion after Heat Aging	ASTM D3359 – Pass
Water Immersion	96 hours in 90°F circulating bath – Pass
Adhesion after Water Immersion	ASTM D3359 – Pass
Xenon	SAE J1885 – 1000kj – Pass
Adhesion after Xenon	ASTM D3559 – Pass
Taber Abrasion	3000 cycles, 500 gram load CS 10 Wheel - Pass

SOLVENT & CHEMICAL RESISTANCE:

Duraflex Solar Shield Clear shows acceptable resistance at the conclusion of 12 hour watch glass tests with 5mm drops of the following solvents:

MEK	IPA	Starting Fluid
Acetone	Heptane	Vinyl Acetate
Ether	Lacquer Thinner	Buytcel

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Duraflex Solar Shield Clear also shows no discoloration or adhesion failure after 24 hour immersion in the following chemicals:

Windshield Washer Fluid	Silicone Lubricant	Furniture Stripper
Pledge	Vinyl Cleaner	Gasoline *
Multi-Purpose Cleaner (409)	Anti-freeze	Kerosene
Spic & Span	Hydrochloric Acid	Bleach
WD-40	Sulfuric Acid	Ammonia
Oven Cleaner	Potassium Sulfate	Chlorine
Armor All	Brake Fluid (DOT 3)	Aluminum Chloride
	Rust Remover	Caustic Soda
	Black Streak Remover	

**YAMAHA 72 hour gasoline immergence test – Pass*

APPLICATION:

Mixing:	The Solar Shield Clear is supplied at print-ready viscosity and can be used directly from the container. Thinning is not recommended
Mesh:	280 - 355 (110 - 140 cm) plain weave
Squeegee:	Sharp 80 durometer polyurethane blade
Cure Parameters:	1-200 watt per inch medium pressure mercury vapor lamp with a Mj output of at least 225
Belt Speed:	40-50 feet per minute depending on lamp efficiency and heat emission
Coverage:	3400 - 3600 square feet per gallon

To determine suitability of the product for the intended use, a pretest prior to production is advised.

Effective 11/30/01

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