

# ClovaShield

## Acrylic Epoxy Enamel

### General Properties

ClovaShield is an isocyanate free, two component acrylic epoxy finish that provides a high gloss tile-like appearance with excellent hardness, chemical and abrasion resistance. Exhibits superior gloss and color retention similar to two component urethanes. ClovaShield has a "no objection" status with the Canadian Food Inspection Agency for use on walls, ceilings and floors of registered establishments.

### Recommended Uses

Ideally suited as an isocyanate free alternative to 2K Urethanes this product can be used on transportation, agriculture and oil & gas equipment. Also for use in hospitals, cafeterias, sanitary areas, high traffic public use facilities, institutions, car washes where a highly chemical, water and weather resistant product is required.

### Product Information

<b>GENERIC TYPE</b>	Acrylic Modified Epoxy
<b>PIGMENT TYPE</b>	Lightfast Pigment
<b>COLOR</b>	White, Black, Factory-Mixed and Custom Colors
<b>BASES</b>	83800 White, 83803 Clear Base,
<b>FINISH</b>	High Gloss
<b>AVERAGE VOLUME SOLIDS</b>	44.6%
<b>AVERAGE WEIGHT SOLIDS</b>	59.4%
<b>RECOMMENDED FILM THICKNESS</b>	Wet: 3.9 - 5.8 mils Dry: 2 - 3 mils See your Cloverdale Representative for project recommendations.
<b>ACCELERATOR</b>	N/A

<b>MIXED RATIO</b>	4 parts 838 Series A: 1 part 83800 B
<b>INDUCTION TIME</b>	15 minutes at 24°C (75°F)
<b>POT LIFE</b>	12 hours
<b>VISCOSITY MIXED</b>	68 - 73 K.U.
<b>TEMPERATURE RESISTANCE (DRY)</b>	93°C (200°F) Continuous 120°C (250°F) Intermittent
<b>V.O.C. MIXED</b>	<485 gm/lit. (4.0 lbs./gal)
<b>THEORETICAL COVERAGE</b>	834 ft <sup>2</sup> /gal @ 1 mil (25 microns) DFT 20.5 m <sup>2</sup> /L @ 1 mil (25 microns) DFT <i>Actual coverage may vary depending on substrate and application methods.</i>
<b>THINNER</b>	SP03011 High Flash Naphtha 78004 #4 Thinner

### Methods of Application

<b>AIRLESS SPRAY</b>	Speeflo Atlas 30:1 with tip sizes .009" - .013" or equivalent
<b>H.V.L.P.</b>	Binks Model Mach 1 92 x 95AP (pressure) or equivalent
<b>CONVENTIONAL</b>	Binks Model 95GUN 63CSS X 63PB (pressure) or equivalent
<b>BRUSH / ROLLER</b>	Brushing is limited to small areas or for touch up.

**Drying Time** - Temperature, Relative Humidity, and Film Thickness will affect dry and re-coat times.

Substrate Temperature	Touch Dry	Hard Dry	Overcoat Interval		
			Minimum	Maximum	Normal
25°C (77°F)	30 minutes	12 hours	3 hours	indefinite	12 hours
15°C (60°F)	1 hour	24 hours	6 hours	indefinite	18 hours
5°C (41°F)	2 hours	36 hours	9 hours	indefinite	24 hours

**Recommended Primer**

<b>STEEL</b>	83021ClovaPrime 21/ 86850 DuraPrime
<b>CONCRETE</b>	Self Priming
<b>GALVANIZED</b>	Self-priming (see Surface Prep)
<b>ALUMINUM</b>	Self-priming (see Surface Prep)

**Surface Preparation**

All surfaces to be painted must be clean, dry and free of contamination. A tack coat is always recommended. New fibreglass must receive an SSPC-SP1 Solvent Cleaning prior to painting. Old paint must be in sound condition and tested for non-lifting. A barrier primer may be required. Primed surfaces should be sanded with 280 - 320 grit paper prior to top-coating. Non-ferrous metals must be scarified by a sweep blast or other mechanical means.

**Typical Resistance (Non-Immersion)**

<b>WEATHER</b>	EXCELLENT	<b>SALT WATER</b>	EXCELLENT	<b>ACIDS</b>	GOOD
<b>MOISTURE</b>	EXCELLENT	<b>FRESH WATER</b>	EXCELLENT	<b>ALKALIS</b>	GOOD
<b>SOLVENTS</b>	EXCELLENT	<b>ABRASION</b>	EXCELLENT	<b>OIL</b>	EXCELLENT

**Limitations**

After this product has cured for more than 3 days, the surface will require sanding for adhesion purposes on subsequent coats. For best results, apply when substrate temperature is above 10°C (50°F) and at a minimum of 3°C (5°F) above the dew point. Painting should not proceed when the relative humidity is above 85%.

**Mixing Instructions**

Mix base and curing agent separately with good agitation. Add converter or curing agent to base component and mix thoroughly until homogenous. Allow to react in can for 15 - 20 minutes (induction time). If thinning is necessary or required, proceed only after recommended induction time has passed. Carefully maintain water traps in all air lines. Humid conditions can lead to condensation during the curing cycle, resulting in loss of gloss.

**Safety Precautions**

This product is for industrial use only. **Refer to Material Safety Data Sheet for proper health and safety information.**

**Storage and Handling**

<b>FLASH POINT</b>	24°C (75°F) TCC
<b>PRODUCT WEIGHT</b>	A = 8.27 lbs B = 1.19 lbs/gal (container extra)
<b>STORAGE</b>	Cool, dry, secure location. See your Cloverdale Paint Representative.
<b>PACKAGE SIZE</b>	1 gallon kit: 3.02 L 838 Series A, 0.76 L 83800 B 5 gallon kit: 15.12 L 838 Series A, 3.78 L 83800 B

Some package sizes or colors may be by special order only. Please check with your Cloverdale Representative when ordering.

**Warranty Disclaimer**

Cloverdale Paint manufactures quality products. In the event that this product is defective or in any way unsuitable for the application for which it is sold, Cloverdale Paint Inc. will replace the product free of charge. The warranty provided by this data sheet is the only warranty or guarantee of quality made in respect of this product by Cloverdale Paint Inc. By purchasing this product the customer accepts this warranty in lieu of all others, and waives all claims to any other remedy arising from any warranty or guarantee of quality, whether such warranty or guarantee of quality was made expressly to the customer or implied by any applicable law.

**Cloverdale Paint Inc.**

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## ClovaShield PERFORMANCE CRITERIA

### 1. Abrasion Resistance

**Method:** ASTM D4541, Elcometer Adhesion Test

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** Minimum 600 psi

### 2. Adhesion

**Method:** ASTM D3359 Crosscut Adhesion Test

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** No adhesion failure (5B)

### 3. Impact Resistance Forward

**Method:** ASTM D2794

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** Minimum 23 inch lbs.

### 4. Flexibility

**Method:** ASTM D222 Cylindrical Mandrel Bend  
Test

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** Minimum 1/4 " Mandrel

### 5. Pencil Hardness

**Method:** ASTM D3363

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** Minimum HB

### 6. Salt Spray Resistance

**Method:** ASTM B117

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** After 1000 hours, no blistering, cracking  
or delamination of film. No more than 3/16 inch  
rust creepage at scribe

### 7. QUV Accelerated Weathering

**Method:** ASTM G53, using UVB 313 bulbs

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** After 1000 hours, no visible color  
change; less than 5% gloss loss

### 8. Humidity Resistance

**Method:** ASTM D4585

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

**Results:** After 1000 hours, few #8 (medium)  
blisters

### 9. Chemical Resistance

**Method:** Room temperature covered spot test for  
24 hours

**Coating System:** ClovaPrime 21 Primer, 83800  
Topcoat

Coating System was exposed to - 5% Sodium  
Hydroxide Solution; 5% Sulfuric Acid Solution; 5%  
Hydrochloric Acid Solution; 5% MonoBasic  
Sodium Phosphate Solution; Heavy Duty Liquid  
Detergent

**Results:** Unaffected - Slight discoloration  
permitted.

Check for recent amendments to this data sheet at [www.cloverdalepaint.com](http://www.cloverdalepaint.com)



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