



PROTECTIVE COATINGS DATA SHEET

83021 ClovaPrime 21 Epoxy Primer

General Properties

A heavy duty, high performance, epoxy primer that provides excellent corrosion resistance over blasted or power tool cleaned steel. ClovaPrime 21 has a low-gloss finish with good flexibility on aging. ClovaPrime 21 is a two component product with base 83021 "A" and converter 83021 "B" supplied in separate containers.

Recommended Uses

A rust inhibitive primer for steel surfaces where excellent weathering, chemical and corrosion resistance is required. This high performance primer can be topcoated with a variety of Cloverdale finishes including two component urethane, acrylic modified urethane, epoxy enamel and alkyd enamels.

Product Information

Generic Type:

Polyamide Cured Epoxy

Pigment Type:

Titanium Dioxide Zinc Phosphate and Inerts

Color:

83021 Grey, 83023 Red Oxide

Finish:

Low-gloss

Average Volume Solids:

60%

Average Weight Solids:

77%

Recommended Mills Per Coat:

2 - 3 mils Dry
3.5 - 5 mils Wet

Theoretical Coverage:

961 sq. ft./gal. @ 1 mil Dry Film Thickness
24 m²/L @ 25 microns Dry Film Thickness
Actual Coverage will be less due to job conditions, type of substrate, loss in can and efficiency of application equipment.

Mixed Ratio 4:1:

4 part 83021 Series "A": 1 part 83021 "B"
Induction Time:
15 minutes @ 77°F (25°C)

Pot Life:

8 hours at 75°F (24°C), Less at higher temperatures.

Viscosity Mixed:

70 - 75 K.U.

Temperature Resistance (Dry):

200°F (93°C) Continuous
250°F (120°C) Intermittent

V.O.C. Mixed:

407g/L (3.39 lbs./gal.)

Maximum Thinning to Obtain VOC of 420 gm./L

(3.5 lbs./gal.):
24.7 mL/L (3.2 fl. oz./gal.)

Thinner:

C-70 Slow or C-25 Fast Evaporating

Clean Up:

C-70 Slow or C-25 Fast Evaporating

Accelerator:

#A-65 Refer to Data Sheet

Methods of Application

Airless Spray

Speeflo Atlas 30:1 with tip sizes .017" - .021" or equivalent

H.V.L.P.

Binks Model Mach 1 94 x 97AP (pressure) or equivalent

Conventional

Binks Model 95GUN 63CSS x 63PB (pressure) or equivalent

Brush/Roller

Brushing is limited to small areas or touch-up.

Drying Time

Substrate Temperature	Touch Dry	Hard Dry	Overcoat Interval		
			Minimum	Maximum	Normal
77°F (25°C) Do not apply below 45°F (7°C)	1 hour	24 hours	3 hours	3 months*	3 hours

* Assuming surface temperatures do not exceed 50°C.

Recommended Primer

Steel	Self-Prime
Galvanized	83050 Etch Prime 50 Vinyl Wash Primer
Aluminum	83050 Etch Prime 50 Vinyl Wash Primer

Surface Preparation

Surface to be coated must be clean, dry and free from loose mill scale, weld spatter, and other contamination. For maximum performance blast cleaning to "Commercial Standard" SSPC-SP6 is recommended. SSPC-SP3 "Power Tool Cleaning" followed by solvent cleaning is permitted for less severe environments. Service life will be dependent on surface conditions and thoroughness of cleaning.

Typical Resistance (Non-Immersion)

WEATHER	Excellent	SALT WATER	Good	ACIDS	Good
MOISTURE	Excellent	FRESH WATER	Good	ALKALIS	Excellent
SOLVENTS	Good	ABRASION	Excellent	OIL	Excellent

Limitations

Not recommended for immersion service. For best results apply when substrate temperature is above 45°F (7°C), and at a minimum of 5°F (3°C) above the dew point. Coating should not proceed when the relative humidity is above 85%.

Mixing Instructions

Mix base ("A") and curing agent separately with good agitation. Add converter or curing agent ("B") to base component and mix thoroughly until homogenous. Allow to react in can for 15 minutes (induction time). Reduce as required for application. In cool weather, product will perform better if kept at room temperature. (70° - 80°F). (21° - 26°C).

Safety Precautions

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

Storage and Handling

Flash Point	19°F (-7°C) T.C.C.
Product Weight	A= 10.76 lbs. B= 1.55 lbs./U.S. gallon, container extra
Storage	See your Cloverdale Paint Representative
Package Size	1 gallon kit 3.02 L 830 Series A 0.76 L 83021B 5 gallon kit 15.12 L 830 Series A 3.78 L 83021 B

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.

ClovaPrime 21 PERFORMANCE CRITERIA

1. Abrasion

Method - ASTM D4060 Abrasion
Resistance of Organic Coating by Taber
Abrader, 100 g/ load, CS17 Wheel, 1000
Cycles
Coating System – ClovaPrime 21, (1 coat)
Requirements – Not more than 41 mg loss

2. Adhesion

Method – ASTM D4541, Elcometer
Adhesion Test
Coating System – ClovaPrime 21, (1 coat)
Requirements – Not less than 500 psi

3. Chemical Resistance

Method – Covered spot test for 1 week at
room temperature
Coating System – ClovaPrime 21, (1 coat)
Coating Was Exposed To - 5% Sodium
Hydroxide Solution; 5% Sulfuric Acid
Solution; 5% Hydrochloric Acid; 5%
MonoBasic Sodium Phosphate Solution; 5%
Sodium Hypochlorite Solution; Heavy Duty
Liquid Detergent.
Requirements – Unaffected - slight
discoloration permitted

4. Flexibility

Method – ASTM D522 Cylindrical Mandrel
Bend Test
Coating System – ClovaPrime 21, (1 coat)
Requirements – Not less than 8%
Elongation

5. Humidity/ Condensation

Method - ASTM D4585
Coating System –
ClovaPrime 21, (1 coat)
Requirements – No blistering, cracking
or delamination of film after 1000 hours

6. Salt Spray (Fog)

Method - ASTM B117
Coating System –
ClovaPrime 21, (1 coat)
Requirements – No blistering, cracking
or delamination of film after 1000 hours.
Not more than 3/8" rust creepage at
scribe.

7. Impact Resistance

Method – ASTM D2794
Coating System –
ClovaPrime 21, (1 coat)
Requirements – Not less than 44" lbs.

8. Pencil Hardness

Method – ASTM D3363
Coating System –
ClovaPrime 21, (1 coat)
Requirements – Minimum H



Cloverdale Paint

6950 KING GEORGE HWY., SURREY, B.C., V3W 4Z1
PHONE: (604) 596-6261 FAX: (604) 597-2677