



ClovaPrime 21

Epoxy Primer

General Properties

A heavy duty, high performance VOC compliant 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. Clova Prime 21 meets the VOC requirements of Environmental Canada Category #25 and is approved by the Master Painters Institute under category #101.

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 enamel.

Product Information

GENERIC TYPE	Polyamide Epoxy
PIGMENT TYPE	Titanium dioxide, zinc phosphate & inerts
COLOR	Grey and Red
BASES	83021 Grey, 83023 Red
FINISH	Low gloss
AVERAGE VOLUME SOLIDS	57%
AVERAGE WEIGHT SOLIDS	71%
RECOMMENDED FILM THICKNESS	Wet: 3.5 - 5 mils Dry: 2 - 3 mils See your Cloverdale Representative for project recommendations.
THEORETICAL COVERAGE	961 ft ² /gal @1 mil (25 microns) DFT 23.5 m ² /L @ 1 mil (25 microns) DFT Actual coverage may vary depending on substrate and application methods.

MIXED RATIO	4 parts 83021 A : 1 part 83021 B
INDUCTION TIME	15 minutes at 25°C (77°F)
POT LIFE	8 hours at 24°C (75°F) (less at higher temperatures)
VISCOSITY MIXED	70 - 75 K.U.
TEMPERATURE RESISTANCE (DRY)	93°C (200°F) Continuous 120°C (250°F) Intermittent
V.O.C. MIXED	<340 g/L (2.8 lbs./gal.)
THINNER	C-70 Slow Evaporating C-25 Fast Evaporating
ACCELERATOR	A-65

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

Substrate Temperature	Touch Dry	Hard Dry	Minimum	Overcoat Interval	
				Maximum	Normal
25°C (77°F)	1 hour	24 hours	2 hours	6 months*	3 hours
15°C (59°F)	2 hours	36 hours	4 hours	6 months*	6 hours
5°C (41°F)	4 hours	48 hours	6 hours	6 months*	8 hours

Recommended Topcoat

Most Cloverdale Conventional and High Performance Coatings: see your Cloverdale Paint Representative for recommendations for your project. (see Limitations)

Surface Preparation

Surfaces to be coated must be clean, dry and free from loose mill scale, weld spatter and other contamination. For maximum performance, blast cleaning to an SSPC-SP6 Commercial Blast Cleaning is recommended. Sandblasted surfaces must be coated soon after blasting to prevent flash rusting. For less severe environments, SSPC-SP1 Solvent Cleaning followed by an SSPC-SP3 Power Tool Cleaning is acceptable. Service life will be dependent on surface conditions and thoroughness of cleaning. Epoxy primers and topcoats must be re-coated within the maximum overcoat window or sanding or some other form of scarification will be necessary to achieve intercoat adhesion. Galvanize, Aluminum and other non-ferrous metals must be Brush-Off Blasted to an SSPC-SP7 at a profile of 1.5 - 2.0 mils.

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 7°C (45°F), and at a minimum of 3°C (5°F) above the dew point. Coating should not proceed when the relative humidity is above 85%.

Mixing Instructions

Mix base component A and curing agent B separately with good agitation. Add curing agent to base component and mix thoroughly until homogenous. Allow to react in can for 15 minutes (induction time). If thinning is necessary or required, proceed only after recommended induction time has passed.

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	-7°C (19°F) TCC
PRODUCT WEIGHT	A = 10.76 lbs. B = 1.55 lbs./gal., (container extra)
STORAGE	Cool, dry, secure location. See your Cloverdale Paint Representative.
PACKAGE SIZE	1 gallon kit: 3.02 L 83021 A, 0.76 83021 B 5 gallon kit: 15.12L 83021 A, 3.78L 83021 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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ClovaPrime 21 PERFORMANCE CRITERIA

1. Abrasion Resistance

Method: ASTM D4060 Abrasion Resistance of Organic Coating by Taber Abrader, 1000 gram load, CS-17 Wheel, 1000 Cycles

Coating System: ClovaPrime 21, (1 coat)
Results: Not more than 41 mg. loss

2. Adhesion

Method: ASTM D4541, Elcometer Adhesion Test

Coating System: ClovaPrime 21, (1 coat)
Results: 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 Hydrochlorite Solution; Heavy Duty Liquid Detergent

Results: Unaffected - slight discoloration permitted

4. Flexibility

Method: ASTM D522 Cylindrical Mandrel Bend Test

Coating System: ClovaPrime 21
Results: Not less than 8% elongation

5. Humidity / Condensation

Method: ASTM D4585

Coating System: ClovaPrime 21, (1 coat)
Results: No blistering, cracking or delamination of film after 1000 hours

6. Salt Spray (Fog)

Method: ASTM B117

Coating System: ClovaPrime 21, (1 coat)
Results: 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)
Results: Not less than 44 inch-pounds

8. Pencil Hardness

Method: ASTM D3363

Coating System: ClovaPrime 21, (1 coat)
Results: Minimum H Hardness

Check for recent amendments to this data sheet at www.cloverdalepaint.com



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