



## ClovaMastic 8311 Series

### Description

ClovaMastic is a high performance, fast curing, multi-purpose, immersion-grade epoxy coating that can be applied at temperatures as low as -18°C (0°F). This highly corrosion resistant epoxy is ideal for steel subject to moderate to severe industrial exposures and can be applied to marginally prepared steel surfaces and properly prepared industrial floors.

### Coating Properties

<b>Coating Category</b>	Epoxy Mastic
<b>Mix Ratio</b>	1:1
<b>Volume Solids</b>	80% +/- 2
<b>Pot Life @ 50% RH, 25°C (77°F)</b>	2.5 hours
<b>Induction Time</b>	Not required
<b>Mixed sag</b>	>25 mils (635 microns)
<b>Mixed viscosity</b>	3000 centipoise
<b>Gloss @ 60°</b>	<40
<b>Product VOC</b>	<205g/l (1.7 lbs/gal)
<b>In-Service Temperature Limits</b>	
<b>Continuous:</b>	93°C (199°F)
<b>Intermittent:</b>	93°C (199°F)
<b>Immersion:</b>	*Commodity dependent (contact your Cloverdale Representative for information)

### Coverage Information

<b>Theoretical Coverage</b>	1251 ft <sup>2</sup> /gal (30.7 m <sup>2</sup> /L) @ 1 mil (25 microns) DFT *based on 100% transfer efficiency
<b>Recommended Film Thickness</b>	Wet: 8.0 – 12.5 mils (203 – 317 microns) Dry: 6 – 10 mils (152 - 254 microns)
<b>Applied Coverage</b>	208.5 ft <sup>2</sup> /gal (5.1 m <sup>2</sup> /L) @ 6 mils (152 microns) 125.1 ft <sup>2</sup> /gal (3.1 m <sup>2</sup> /L) @ 10 mils (254 microns) *based on 100% transfer efficiency

### Approvals & Certifications

AIM Cat 25  
Auto Refinish Compliant Cat 1  
AWWA C210 (non potable)  
CFIA D1/D2/D3  
MPI#108

### Benefits

Low VOC & HAPS  
Fast Curing  
Abrasion Resistance  
Chemical Resistant  
Moisture Resistant  
Surface Tolerant

### Market/End-Uses

Tanks  
Structural Steel  
Pipe  
Pulp & Paper  
Industrial Facilities  
Industrial Floors  
Marine Applications  
Tug and Barge  
Water/Wastewater  
Oil and Gas

### Bases

83110 Off-White  
83113 Neutral Base  
83114 Black  
83115 Safety Yellow  
83117 Mid-Coat Formula  
83119 RTS Formula

### Part B Products

83110B



## Substrates and Surface Preparation

Performance is proportional to the degree of surface preparation. All surfaces must be clean, dry and free from loose mill scale, weld spatter, oils, grease, wax, dust or any other foreign contaminant.

Minimum preparation as follows:

**Ferrous (non-immersion):** SSPC-SP 6 Commercial Blast with a minimum of 2.5 mil angular surface profile. (where sandblasting is not permitted SSPC SP2/3 Hand/Power Tool Clean)

**Ferrous (immersion):** SSPC-SP5 White Metal Blast (preferred) or SSPC-SP10 Near White Blast (minimum)

**Non-Ferrous & Galvanized:** Use ClovaClean 78100 to clean the surfaces. SSPC-SP16 Brush-off Blast (preferred) with non-metallic abrasive or SSPC SP2/3 Hand/Power Tool Clean (note: surfaces should be coated immediately after preparation to avoid oxidization of the substrate which affects coating adhesion)

**Concrete:** Remove all contaminants per ASTM D4258, abrade surface as per ASTM D4259, ensure surface profile of ICRI CSP 3 to 5, ensure pH range between 6.5 to 9.5, use Cloverdale 83225 Patch Kit to fill bug-holes and voids in the substrate, perform moisture transmission test as per ASTM D4263.

## System Recommendations

ClovaMastic is self-priming on steel. For off-shore or highly corrosive environments, or for added corrosion resistance, ClovaMastic can be applied over the following Cloverdale zinc-rich primers:

ClovaZinc 2 – Inorganic Zinc

ClovaZinc 3 – 2K Epoxy Zinc

ClovaZinc 5 – Hybrid Inorganic Zinc Rich Epoxy

For improved exterior weathering, ClovaMastic can be used as a primer beneath Cloverdale Armourshield Polyurethane coatings including Armoursheild 835, 847, 839 and 888 series.

Where isocyanates are unacceptable, ClovaMastic can be used as a corrosion resistant primer beneath the following isocyanate-free finish coats:

ClovaShield 838 series Acrylic Epoxy

SuperShield Iso-Free Urethane

ClovaMastic is compatible with other Cloverdale 2K epoxy coatings including DuraPrime, ClovaPrime, ClovaGuard and others.

For information on additional primer and finish coat options, contact your Cloverdale Technical representative.

## Substrates

Ferrous Metals

Non-Ferrous Metals

Concrete/Masonry

Fibreglass

Previously Coated Surfaces

## Thinner

C25 Fast Thinner

C70 Medium Thinner

## Equipment Cleaning

C25 Fast Thinner

SP06485T0 Flushing Solvent  
78043

## Product Weight

Part A: 14.7 lbs/gal (6.7 kg/gal)

Part B: 13.4 lbs/gal (6.1 kg/gal)

## Shelf Life

2 years on Part A & B

Applicable only for material stored in unopened, undamaged factory filled containers stored at 4°C-38°C (39°F-100°F). Subject to reinspection.

## Flash Point

Part A 17.5°C (63.5°F)

Part B 28.5°C (83.3°F)



## Mixing Instructions

1 Part A to 1 Part B by volume

Stir Part A and Part B separately

Slowly pour Part B into Part A and mix well until homogenous

Scrape sides and bottoms of containers to ensure all material from each component is combined. Drill mixing is preferred, ensuring slow to medium agitation for 3 to 5 minutes sufficient to combine components being careful not create a vortex while mixing to prevent air entrapment and reduction of pot life. Reduction (if required) should be performed with combined material, and then mixed for 3-5 minutes more to ensure proper suspension of reducer in the catalyzed product.

## Equipment

<b>Airless Spray</b>	Min. Fluid Pressure	3000 psi (206 bar)
	Min. Pump Delivery (capable)	0.95 gpm (3.6 l/min)
	Recommended Tip Size (range)	.019" - .025"
	Recommended Manifold Filter	60 mesh
<b>Air Assisted Airless</b>	Min. Fluid Pressure	3000 psi (206 bar)
	Atomizing Air	80 -100 psi (5.5 – 6.9bar)
	Recommended Tip Size (range)	.019" - .025"
<b>Conventional</b>	Atomizing Air	80 -100 psi (5.5 – 6.9bar)
	Nozzle Set	2.4 – 2.8 mm
<b>Brush/Roll</b>	Acceptable (*use solvent resistant equipment. Film build capability will be reduced. Lap marks may be visible.)	

\*values are based on application conditions of 15°C (59°F) to 25°C (77°F).

\*lower temperatures can increase the viscosity of coatings, and as such, adjustments may need to be made to equipment to accommodate for changes in the physical properties of the coating.

## Additional Notes

ClovaMastic is prone to colour change and fading like most epoxies when exposed to UV, which does not affect the performance of the product. Do not use for potable water service.

Clovamastic is suitable for use with plural component application equipment.




**Drying and Recoat Times**

Temp	Touch Dry	Hard Dry	Full Cure	Recoat (self) min.	Recoat (self) max.
-18°C (0°F)	48 hours	96 hours			
0°C (32°F)	24 hours	80 hours			
5°C (32°F)	12 hours	16 hours	14 days	16 hours	12 months
15°C (59°F)	3 hours	6 hours	10 days	6 hours	12 months
25°C (77°F)	2 hours	4 hours	7 days	2 hours	12 months
35°C (95°F)	1 hour	2 hours	7 days	1 hour	12 months

Recoat Urethane min.	Recoat Urethane max.
4 hours	12 months
2 hours	12 months
1 hour	12 months

\*Relative humidity, air circulation, and other conditions can affect dry time and curing

**Cure Time for Immersion**

Temp	Immersion
-18°C (0°F)	
0°C (32°F)	
15°C (59°F)	
25°C (77°F)	7 days
35°C (95°F)	7 days

**Performance Testing**

Performance Test	Method	Result
Pencil Hardness	ASTM D3363	5H minimum
Adhesion	ASTM D4541	Not less than 800 lbs (Bonderite)
Humidity	ASTM D4585	1500 hours (pass)
Salt Spray (Fog)	ASTM B117 *blasted steel	After 5000 hours, no blistering, cracking or delamination of film. No more than 1/8" (3mm) rust creepage at scribe
Impact Resistance	ASTM D2794	>24.5 in/lbs direct, >5.5 in/lbs reverse
Abrasion Resistance	ASTM D4060	<100mg loss, CS17 Wheel 1000 revolutions
Cathodic Disbondment	ASTM G8 at -1.5V and 20 C. for 28 days: three holidays	Pass





## Safety Precautions

**This product is for Industrial use only.**

**WARNING!** If you scrape, sand or remove old lead paint from any surface you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Carefully clean up with a wet mop or HEPA vacuum. For additional information, Canadian customers contact the Product Safety division of Health Canada at 1-800-O-CANADA, US customers contact the U.S. EPA/Lead Information Hotline at 1-800-424-LEAD (5323).

**WARNING! Use With Adequate Ventilation.** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**WARNING! Proper breathing PPE must be worn during application. Refer to Safety Data Sheet for proper health and safety information, located at [www.cloverdalepaint.com](http://www.cloverdalepaint.com)**

## Updates

Please visit [www.cloverdalepaint.com](http://www.cloverdalepaint.com) for the most recent versions of Technical Data Sheets and Safety Data Sheets.

**Last Modification date:** 07/04/2024

## LIMITATION OF LIABILITY

To the best of our knowledge, the technical data contained herein are true and accurate at the time of issuance but are subject to change without prior notice. We guarantee our product to conform to the specifications contained herein. All technical advice, recommendations and services regarding this product are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and know-how, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from this product use by Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate under or suggest infringement of any patent.

## WARRANTY

Cloverdale Paint Inc. warrants its products to be free from defects in material and workmanship. At its option, Cloverdale Paint Inc. will either replace products not conforming to this warranty or credit the Buyer's account the invoiced amount for the non-conforming products. This is Cloverdale Paint Inc.'s sole obligation and Buyer's exclusive remedy in connection with the products. In no event shall Cloverdale Paint Inc. be liable for special, indirect, consequential or incidental damages.

By purchasing this product, the Buyer 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 Buyer or implied by any applicable law.

Any claim under this warranty must be made in writing by the Buyer to Cloverdale Paint Inc. within ten (10) days of discovery of the claimed non-conformance, but in no event later than one (1) year from the delivery date. The Buyer's failure to notify Cloverdale Paint Inc. of such non-conformance as required herein shall bar the Buyer from recovery under this warranty.

