

## Product Data

### Application Instructions

- Low VOC
- High-performance general maintenance coating for new or old steel
- Cures through wide temperature range
- Self-priming topcoat over most existing coatings
- Can be overcoated with wide range of topcoats
- Compatible with prepared damp surfaces
- Compatible with adherent rust remaining on prepared surfaces
- 5 mils or more in a single coat
- Resists high humidity and moisture
- Temperature resistance to 450°F on insulated or uninsulated surfaces when mixed with Blome glass flake additive
- Can be applied to substrates with temperatures up to 250°F

MC-3000's low solvent level meets VOC requirements, reduces the chances for film pinholing and solvent entrapment at the substrate-coating interface, often a major cause of coating failure with conventional epoxies and lower solids systems. MC-3000 is available in a variety of colors, including aluminum, and therefore does not require a topcoat. For extended weatherability or special uses, a topcoat may be desired.

### Typical Uses

MC-3000 is used in those areas where blasting is impractical or impossible. As a maintenance coating, MC-3000 protects steel structures in industrial facilities, bridges, tank exteriors, marine weathering, offshore, oil tanks, piping, roofs, water towers and other exposures. MC-3000 has good chemical resistance to splash/spillage, fumes and immersion in neutral, fresh and salt water (see resistance table). Contact your Blome representative for specific information.

### Typical Properties

#### Physical

Abrasion resistance (ASTM D4060)	
1 kg load/1000 cycles	weight loss
CS-17 wheel	102 mg
Impact resistance (ASTM D2794)	
Direct	24 in $\diamond$ lb
Reverse	6 in $\diamond$ lb
Moisture vapor transmission (ASTM D1653)	
	6.28g/m <sup>2</sup> /24hrs.
Adhesion (ASTM D4541)	
	900 psi

#### Performance

Salt spray (ASTM B117) 3000 hours	
Face blistering	None
Humidity (ASTM D2247) 750 hours	
Face corrosion, blistering	None
Immersion (NACE TM-01-69) fresh water 1 year	
Blistering	None

### Physical Data

Finish	Semigloss
Color	Standard, Rapid Response, custom colors and aluminum

*White and light colors may show yellowing on aging. Use of Blome epoxy accelerator with white or light colors will slightly discolor. Yellow, red and orange colors will fade faster than other colors due to the replacement of lead-based pigments with lead-free pigments in these colors*

Components	2
Curing mechanism	Solvent release and chemical reaction between components

#### Volume solids (ASTM D2697 modified)

3000	83% $\pm$ 3%
3000AL	88% $\pm$ 3%

Dry film thickness (per coat)	4-8 mils (100-200 microns)
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Coats	1 or 2
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Theoretical coverage	ft <sup>2</sup> /gal	m <sup>2</sup> /L
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1 mil (25 microns)		
3000	1331	32.6
3000AL	1412	34.7

5 mils (125 microns)		
3000	266	6.5
3000AL	282	6.9

VOC		lb/gal	g/L
3000 mixed*		1.5	180
mixed/thinned (1/2 pt/gal)**		1.8	220
3000AL mixed**		1.0	120
mixed/thinned (1-1/2 pt/gal)**		2.0	240

\*EPA method 24

\*\* Calculated

Temperature resistance,*		wet	dry	
3000	°F	°C	°F	°C
continuous	100	38	200	93
intermittent	100	38	350	177
with Blome Glass Flake (1 gal can/2 gal mix)				
continuous	100	38	425	218
intermittent	100	38	450	232

\* At temperatures above 200°F, dry film thickness must not exceed 10 mils (250 mils).

Some discoloration and darkening will occur at temperatures greater than 200°F, this will not affect film integrity or coating performance.

Flash point (SETA)		°F	°C
3010/3000 resin		131	55
3000 cure		85	29
3010AL/3000AL resin		110	43
3000AL cure		116	47
Blome Thinner #2		78	25
Blome Thinner #4		145	63
Blome Thinner #3		2	-17

\* MC-3000 resin and MC-3010 resin are identical, and are packaged under a common label as MC-3010/3000 resin. MC-3000 cure and MC-3010 cure are different, and are labeled individually.

## Chemical Resistance Guide

Environment	Immersion		Splash and Spillage		Fumes and Weather	
	3000	3000AL	3000	3000AL	3000	3000AL
Acidic	*	*	F	F	G	G
Alkaline	*	*	E	G	E	E
Solvents	*	*	G	G	E	E
Salt water	E	E	E	E	E	E
Water	E	E	E	E	E	E

F-Fair G-Good E-Excellent

\*Contact your Blome representative.

\*This table is only a guide to show typical resistances of MC-3000 and 3000AL. For specific recommendations, contact your Blome representative for your particular corrosion protection needs.

## Systems using MC-3000 or 3000AL

1st coat	2nd Coat***	3rd coat***
MC-3000	None	None
MC-3000	3030	None
MC-3000**	3000	None
MC-3000**	3000	3030 or 3050

\*\*\*Water immersion.

\*\*\*For color contrast when 2 coats of 3000AL are used, 3000AL red can be used as first coat.

## Recoat/Topcoat time

	°F/°C		
minimum (hours)	90/32	70/21	50/10
3000	8	16	30
3000 with 1 Blome Epoxy Accelerator	4	7	16
3000AL	3	12	48
3000AL with 1/2 pt Blome Epoxy Accelerator	3	5	12

## Recoat/Topcoat time @ 70°F (21°C)

System	Maximum time
3000/3000	3 months
3000 w/Blome Epoxy Accelerator/3000	1 month
3000/3050 or 3030	1 month
3000 w/Blome Epoxy Accelerator or 3030	2 weeks

Drying times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures - not simply ambient air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window.

Note: If maximum time is exceeded, roughen surface. For topcoats (finish coats) not listed, see Product Data sheet for specific topcoat time limitations.

## Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, MC-3000 can be applied over mechanically cleaned surfaces. All surfaces must be clean, dry and free of all contaminants, including salt deposits.

MC-3000 may be used over most types of properly prepared and tightly adhering coatings. A test patch is recommended for use over existing coatings.

**Steel** – Remove all loose rust, dirt, moisture, grease or other contaminants from surface. Power-tool clean SSPC-SP3 or hand-tool clean SSPC-SP2. For more severe environments, dry abrasive blast SSPC-SP7. Water blasting is also acceptable. For immersion service – dry abrasive blast SSPC-SP10. For high-heat service on uninsulated substrates, abrasive blast per SSPC-SP6. For insulated substrates, abrasive blast per SSPC-SP10. In both cases, a 2-3 mil profile must be obtained.

**Aluminum** – Remove oil, grease or soap film with neutral detergent or emulsion cleaner, treat with Alodine® 1200, Alumiprep® or equivalent or blast lightly with fine abrasive.

**Galvanizing** – Remove oil or soap film with detergent or emulsion cleaner, then use zinc treatment such as Galvaprep® or equivalent or blast lightly with fine abrasive.

**Concrete** – Acid etching (ASTM D4260) or abrasive blast (ASTM D4259) new concrete cured a minimum of 14 days.

## Application Data

Applied over	Steel, concrete, aluminum, galvanizing
Surface preparation	
Steel	SSPC-SP2, 3, 6, 7, 10, 11, or 12
Concrete	ASTM D4259 or 4260
Aluminum	Alodine®, Alumiprep® or light abrasive blast
Galvanizing	Galvaprep® or light abrasive blast
Method	Airless or conventional spray. Brush or roller may require additional coats.

Mixing ratio (by volume) 1 part resin to 1 part cure

Pot life (hours)	°F/°C				
Blome Accelerator	MC	90/32	70/21	50/10	32/0
Amount	/mixed 5 gal				
None	3000	1 1/2	2 1/2	14	17
	3000AL	3 1/2	5 1/2	10	15
1/2 pt	3000	1	1 1/2	2 1/2	14
	3000AL	1	1 1/2	2 1/2	14
1 pt	3000	1/2	1	1 1/2	12

Pot life is the period of time after mixing that a five-gallon unit of material is sprayable when thinned as recommended. Mixture may appear fluid beyond this time, but spraying and film build characteristics may be impaired.

## Environmental conditions

Product	Air or Surface Temperature
MC-3000	40° to 250°F (4° to 121°C)
MC-3000 AL	40° to 122°F (4° to 50°C)
MC with Blome Epoxy Accelerator	20° to 122°F (-6° to 50°C)
MC-3000 with Thinner #4*	123° to 250°F (51° to 121°C)

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation. At freezing temperatures, surface must be free of ice.

Do not use MC-3000AL on water damp surfaces.

\*MC-3000 may be applied to surfaces as hot as 250° (121°C). When applying MC-3000 to surfaces between 122°F and 250°F, thin 1/2 pint per gallon with Amercoat 101 thinner. Multiple passes may be required to achieve film build and to avoid solvent blistering.

**Drying time (ASTM D1640) (hours)**

		<b>touch</b> °F/°C						
Blome Epoxy Accelerator		120/49	90/32	70/21	50/10	32/0	20/-6	
Amt	3000	1½	4½	9	28	96	NR	
	3000AL	1	4	12	36	96	NR	
1/2 pt	3000	1½	3	15	24	72	120	
	3000AL	1	1½	2½	5	10	24	
1 pt	3000	1	2	4	15	48	96	
		<b>through</b>						
None	3000	6	12	20	40	140	NR	
	3000AL	1½	7½	24	72	216	NR	
½-pt	3000	3	6	10	30	96	180	
	3000AL	2	4	9	24	48	120	
1-pt	3000	2½	5	9	24	72	160	
		<b>Cure for immersion (days)</b>						
None	3000	2	4	7	21	NR	NR	
	3000AL	2	4	7	21	NR	NR	
½-pt	3000AL	1	2	3	7	21	NR	
1-pt	3000	1	2	3	7	21	NR	

Blome Accelerator will slightly discolor MC-3000 white and other MC light colors.

NR = Not recommended

Thinner Blome Thinner #2 or Thinner #4  
Equipment cleaner Blome Thinner #3

**Application Equipment**

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure, hose and tip size may be needed for proper spray characteristics.

**Airless spray** – Standard equipment with 30:1 pump ratio or larger, with a 0.017- to 0.021-inch fluid tip.

**Conventional spray** – Industrial equipment, such as DeVilbiss MBC or JGA or Binks 18 or 62 spray gun. A moisture and oil trap in the main air supply line, a pressure material pot with mechanical agitator and separate regulators of air and fluid pressure are recommended.

**Power mixer** – Jiffy Mixer powered by an air or explosion-proof electric motor.

**Brush or roller** – Additional coats may be required to attain proper thickness.

**Application Procedure**

1. Flush all equipment with thinner or Blome Thinner #3 before use.
2. Stir resin and cure using an explosion-proof power mixer to disperse pigments.
3. Add cure to resin. Mix thoroughly until uniformly blended to a workable consistency. For low temperature application, use Amercoat 861 accelerator. Do not exceed the 1 pint Blome Epoxy accelerator per 5 gallon unit recommendation.
4. Do not mix more material than can be used within the expected pot life.
5. For optimum application, material should be from 50° to 90°F (10° to 32°C). Above 122°F (50°C), sagging may occur.
6. Use only Blome recommended thinners. For potable water applications, see current NSF listing at www.nsf.org for approved thinners and thinning restrictions. For other applications, above 85°F (29°C) use Amercoat 8, or 101 at lower temperatures use Blome Thinner #2. A small amount of thinner greatly reduces viscosity; excessive thinning will cause running or sagging. Thin cautiously as follows:

Amercoat 65 thinner	3000	3000AL
Airless – up to	1/4 pt/gal	1-½ pt/gal
Conventional – up to	½ pt/gal	1-½ pt/gal

Below 50°F additional thinning may be needed and multiple coats required achieving specified thickness.

Above 122°F, up to 250°F surface temperatures, use Amercoat 101 thinner sparingly to promote flow and leveling. Excessive thinning will cause running or sagging.

7. To minimize orange peel appearance, adjust conventional spray equipment to obtain adequate atomization at lowest air pressure.
8. Apply a wet coat in even, parallel passes with 50 percent overlap to avoid holidays, bare areas and pinholes. If required, cross spray at right angles.
9. When applying MC-3000 directly over inorganic zincs or zinc rich primers, a mist coat/full coat technique may be required to minimize bubbling. This will depend on the age of the Dimetcote®, surface roughness and conditions during curing.

Note – Do not use MC-3000AL on water damp surfaces

10. Ventilate confined areas with clean air between coats and while curing the final coat. Prevent moisture condensation on the surface between coats.
11. Repair damaged areas by brush or spray.
12. Clean equipment with thinner or Blome Thinner #3 immediately after use.

**Shipping Data**

Packaging unit	2 gal	5 gal
cure	1-gal can	2.5-gal can
resin	1-gal can	2.5-gal can
Shipping weight (approx)	lbs	kg
2-gal unit		
3000 cure	12.5	5.7
3010/3000 resin	13.7	6.2
3000AL cure	12.1	5.5
3000AL resin	11.0	5.0
5-gal unit		
3000 cure	31.8	14.4
3010/3000 resin	35.0	15.9
3000AL cure	30.9	14.0
3000AL resin	28.3	12.8

Shelf life when stored indoors at 40° to 100°F (4° to 38°C)  
resin and cure: 1 year from shipment date.

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

This mixed product is photochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

## Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

**CAUTION – Improper use and handling of this product can be hazardous to health and cause fire or explosion.**

**Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.**

**This product is to be used by those knowledgeable about proper application methods. Blome makes no recommendation about the types of safety measures that may need to be adopted because these depend on application and space, of which Blome is unaware and over which it has no control.**

**If you do not fully understand the warnings and instructions or if you cannot strictly comply with them, do not use the product.**

**Note:** Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

*This product is for industrial use only. Not for residential use.*

## Limitation of Liability

Blome's liability on any claim of any kind, including claims based upon Blome's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which gives rise to the claim. **In no event shall Blome be liable for consequential or incidental damages.**

**Due to Blome's policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer's responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the Blome International website at [www.blome.com](http://www.blome.com).**

## Warranty

Blome warrants its products to be free from defects in material and workmanship. Blome's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at Blome's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to Blome in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify Blome of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

**Blome makes no other warranties concerning the product. No other warranties, whether expressed, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall Blome be liable for consequential or incidental damages.**

Any recommendation or suggestion relating to use of the products made by Blome, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.



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