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555 Lakeshore Blvd. Painesville Twp., OH 44077

Pre-Proposal Meeting
September 20, 2018
RFP Painting of Bus Washer Bays Walls and Ceiling

In Attendance:

Keith Bare, Director of Maintenance
Andrea Aaby, Procurement and Grants Specialist
Marks Building Company
Great Lakes Contractors
Steve Brazie, Sherwin Williams
EM Painting
The Dependable Painting Company
JBI Painting
Athos Contracting

This project is funded with Federal Transit Administration dollars. That means there are regulations we have to follow with this project. The forms are incredibly important and must be filled out correctly. Please contact Andrea Aaby at aaaby@laketrans.com with any questions.

Please note that the Attachment H – is regarding Disadvantaged Business Enterprise. If you are not working with any subcontractors and/or DBEs you must write in section B or C that you are not working with any subcontractors. And regardless of your DBE status, all proposers must sign and notarize Section E.

Per FTA regulations, this project qualifies as a construction project. Therefore, Laketrans must follow certain laws. Attached to this document are the construction related rules and regulations that this project must follow. Of particular importance to the vendors, Prevailing Wage rules apply.

Submit 2 copies of the proposals. Proposals must include the forms specified in the RFP along with your written proposal of how you will tackle this project – what products you will use, how you intend to clean the surfaces, how you intend to manage the needs of Laketrans's operations, proposed timeline for completion, etc.

Work hours for the project:

4:30am – 3:30pm Monday – Friday

7:00am – 1:00pm Saturday

- All work must be cleaned up before 3:30 Mon-Fri and 1pm on Saturday so the bays can be used to fuel and clean buses.



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Laketrans is looking for the proposal to include pricing for preparing and painting all surfaces in the wash bays – including cleaning, duct work, galvanized metal, insulated wrap, walls.

- Floors are NOT included.
- Side rooms are NOT included.

It would be in the proposer's best interest to break down the costs for each section. Laketrans has a budget that we need to adhere to. We are interested in pricing out the complete project with the understanding that we may have to pare down what is performed to fit within our budget. The more information that the proposer can provide the better.

Because this procurement is a Request for Proposal, Laketrans has the ability to choose the vendor that is able to provide the best value. Best value does not always mean lowest price. Section 3.8 in the RFP describes the Proposal Evaluation Criteria. Per FTA guidelines best value is described as "outcome of an acquisition that . . . provides the greatest overall benefit in response to its material requirements."

Paint color will be chosen after the award is made. The current two tone color scheme is not by design and will not be maintained.

Specifications from Sherwin Williams have been provided (at the end of this document). However, per the RFP, you are free to propose your own preferred products. These specifications are being made available to you if you want to use them. If you propose alternate products, you will need to specify them in your proposal document.




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Pre-proposal Meeting for RFP Painting of Bus Washer Bays

Date: September 20, 2018

Company	MARKS BUILDING COMPANY
Attendee's Name/Title	Kent Marks - President Michael Rice - Chief Operating Officer
Address	346 Hale Rd
City, State, Zip	Painesville Twp, OH 44077
Phone	440-352-0992
E-mail	kent@marksbuilding.com mike@marksbuilding.com
Company	
<div><div>KEITH BARE Director of Maintenance kbare@laketrans.com</div></div>	
DIRECT (440) 350-1036 FAX (440) 354-4202	
555 Lakeshore Blvd. Painesville Twp., OH 44077	
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E-mail	



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Pre-proposal Meeting for RFP Painting of Bus Washer Bays

Date: September 20, 2018

Company	Great Lakes Contractors, LLC
Attendee's Name/Title	Arunas Nasvytis
Address	1234 West Blvd
City, State, Zip	Cleveland, Ohio 44102
Phone	216-631-7777
E-mail	ANASVYTIS@greatlakescontractors.com
Company	
Attendee's Name/Title	
Address	
City, State, Zip	
Phone	
E-mail	




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Pre-proposal Meeting for RFP Painting of Bus Washer Bays

Date: September 20, 2018

Comp	 SHERWIN-WILLIAMS. Protective & Marine Coatings Steve Brazie Protective & Marine Representative Bridge Coatings NACE II CIP The Sherwin-Williams Company 454 Acacia Dr., Willowick 44095 steve.h.brazie@sherwin.com 454 Acacia Dr Cell: 216-310-3574 Fax: 216-252-7807	
Atten		
Name		
Addr		
City,		
Zip		
Pho		
E-mail		
Company		
Attendee's Name/Title		
Address		
City, State, Zip		
Phone		
E-mail		



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Pre-proposal meeting for RFP Painting of Bus Washer Bays
Date: September 20, 2018

Company	<div>ANDREA AABY Procurement & Grants Specialist aaaby@laketran.com DIRECT (440) 350-1022 FAX (440) 354-4202 555 Lakeshore Blvd. Painesville Twp., OH 44077 <u>1-888-LAKETRAN www.laketran.com</u></div>	
Attendee's Name/Title		
Address		
City, State, Zip		
Phone		
E-mail		
Company		
Attendee's Name/Title		
Address		
City, State, Zip		
Phone		
E-mail		

**The
Dependable
Painting
Company**



Joe Shieff
(216) 431-4470

KETRAN

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1500 Lakeshore Blvd. Painesville Twp., OH 44077

Request for RFP Painting of Bus Washer Bays
Due Date: September 20, 2018

Company	Dependable Painting
Attendee's Name/Title	Joe Shieff
Address	4403 Superior Ave
City, State, Zip	Cleveland Ohio 44103
Phone	216-431-4470
E-mail	JoeS@dependable Pty, Com
Company	
Attendee's Name/Title	
Address	
City, State, Zip	
Phone	
E-mail	



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Pre-proposal Meeting for RFP Painting of Bus Washer Bays

Date: September 20, 2018

Company	 <p>Commercial Painting Contractor Serving NE OH & NW PA</p> <p>JBIP PAINTING, INC.</p> <p>Jim Illig, President (440) 223 - 2287 Cell jim@jbipainting.com</p> <p>Interior/Exterior Commercial/ Residential www.jbipainting.com</p>	
Attendee's Name/Title		
Address		
City, State, Zip		
Phone		
E-mail		
Company	 <p>ATHOS CONSTRUCTION</p> <p>JOHN COONDOON (440) 223-2287 Cell</p> <p>7707 Lakeshore Blvd. Painesville, OH 44130 (440) 333-1433 • Fax: (440) 333-1434 http://www.athosconstruction.com</p>	
Attendee's Name/Title		
Address		
City, State, Zip		
Phone		
E-mail		



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Painting of Bus Washer Bays and Ceiling Federal Transit Administration Construction Project Regulations

Workmens' Compensation Act

The CONTRACTOR shall comply with the State law known as the Workmens' Compensation Act and shall pay into the State insurance fund the necessary premiums required by the Act.

Any and all of the employees of CONTRACTOR while engaged in the performance of any work required by CONTRACTOR under this agreement shall be considered to be employees of CONTRACTOR only and not of LAKETRAN, and any and all claims that may arise from the Workers Compensation Act on behalf of said employees while so engaged, and any and all claims made by any third party as a consequence of any act or omission on the part of CONTRACTOR's employees while so engaged in any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility of CONTRACTOR.

The CONTRACTOR may provide certifications in lieu of the above if said is a qualified self-insurer of Workers Compensation.

Work Hours Act

Compliance with 40 USC 327 through 330. If the subject procurement should require the employment of laborers or mechanics on LAKETRAN premises, CONTRACTOR agrees to be bound by the provisions of Title 40, Section 327 through 330, United States Code, also known as the Work Hours Act of 1962.

Davis Bacon Act (Prevailing Wage Rates)

The requirements of the Davis Bacon Act [40 USC § 167; 276a - 276a-5, and 29 CFR § 5] will apply to all construction contracts exceeding the prevailing wage threshold levels established by the Ohio Wage and Hour Division.

Bidders are hereby notified that they will be required to pay minimum wages to all laborers and mechanics at a rate not less than the minimum wage specified in the wage determination made by the United States Secretary of Labor. The minimum wage so paid shall be that in effect ten (10) days before bid opening.

Contract Work Hours and Safety Standards Act as Amended



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Sections 102 and 107 of the Contract Work Hours and Safety Standards Act, as amended, [40 USC §§ 327 through 333; 29 CFR Part 5; 29 CFR Part 1926] will apply to construction contracts.

The wages of every mechanic and laborer will be computed on the basis of a standard work week of 40 hours, and that each worker will be compensated for work exceeding the standard work week at a rate of not less than 1.5 times the basic rate of pay for all hours worked in excess of 40 hours in the work week.

Copeland "Anti-Kickback" Act, as amended

The Copeland "Anti-Kickback" Act, [40 USC § 276c, 29 CFR § 3, and 29 CFR § 5] will apply to construction contracts.

The Contractor agrees that it will not induce, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which that employee is otherwise entitled.

Hatch Act/Work Day and Work Week Standards

Bidders are hereby notified that under the terms of this specification, the standard work day is eight (8) hours and the standard work week is forty (40) hours. Any work in excess of these standards must be compensated at time and one-half (1.5). Also no laborer or mechanic shall be required to work in any unsanitary, hazardous, or any area which may be dangerous to their health or safety.



LAKETRAN 555 Lakeshore Blvd. Painesville, Ohio 44077

Painting of Bus Wash Bays Walls and Ceiling Specification

Area: Concrete Walls

Surface Preparation:

Water Blasting NACE Standard RP-01-72 Removal of oil grease dirt, loose rust, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute. Areas contaminated with diesel dust should be washed with a water soluble cleaner degreaser (i.e. simple green).

Coating System:

Apply two coats of Sherwin-Williams Macropoxy 646 MR (B58-WZ610) @5.0-10.0 mils DFT.

Area: Ceiling

Surface Preparation:

Water Blasting NACE Standard RP-01-72 Removal of oil grease dirt, loose rust, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute. Areas contaminated with diesel dust should be washed with a water soluble cleaner degreaser (i.e. simple green).

Coating System:

Apply one coat of Sherwin-Williams Macropoxy 646 MR (B58-WZ610) @5.0-10.0 mils DFT.

Area: Duct Work:

Surface Preparation:

Water Blasting NACE Standard RP-01-72 Removal of oil grease dirt, loose rust, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute. Areas contaminated with diesel dust should be washed with a water soluble cleaner degreaser (i.e. simple green)
Power Tool Clean per SSPC-SP-3 standards, all pitted and rusted areas.

Coating System:

Apply two coats of Sherwin-Williams Macropoxy 646 MR (B58-WZ610) @5.0-10.0 mils DFT.



LAKETRAN 555 Lakeshore Blvd. Painesville, Ohio 44077

Painting of Bus Wash Bays Walls and Ceiling Specification

Area: Structural Steel:

Surface Preparation:

Water Blasting NACE Standard RP-01-72 Removal of oil grease dirt, loose rust, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute. Areas contaminated with diesel dust should be washed with a water soluble cleaner degreaser (i.e. simple green)

Power Tool Clean per SSPC-SP-3 standards, all pitted and rusted areas.

Coating System:

Prime Coat:

Apply one coat of Sherwin-Williams Epoxy Mastic Aluminum II (B62S100) @4.0-6.0 mils DFT.

Finish Coat:

Apply one coat of Sherwin-Williams Macropoxy 646 MR (B58-WZ610) @5.0-10.0 mils DFT.



Protective & Marine Coatings

MACROPOXY® 646 MR

PART A
PART B

B58WZ610
B58V600

WHITE
HARDENER

Revised: August 1, 2017

PRODUCT INFORMATION

4.34

PRODUCT DESCRIPTION

MACROPOXY 646 MR is a high solids, high build, fast drying, polyamide epoxy designed to protect steel and provide mildew resistance in industrial exposures. The high solids content ensures adequate protection of sharp edges, corners, and welds. This product can be applied directly to marginally prepared steel surfaces.

- Low VOC
- Low odor
- Outstanding application properties
- Ideal for maintenance painting and fabrication shop applications.
- Chemical resistant
- Mildew resistant

PRODUCT CHARACTERISTICS

Finish: Semi-Gloss
Color: White
Volume Solids: 72% ± 2%, mixed, White
Weight Solids: 85% ± 2%, mixed, White
VOC (EPA Method 24): Unreduced: <250 g/L; 2.08 lb/gal
mixed Reduced 10%: <300 g/L; 2.50 lb/gal
Mix Ratio: 1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0* (125)	10.0 (250)
~Coverage sq ft/gal (m²/L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1152 (28.2)	

*May be applied at 3.0-10.0 mils (75-250 microns) dft as an intermediate coat in a multi-coat system. Refer to Recommended Systems (page 2). See Performance Tips section also.

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.0 mils wet (175 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4-5 hours	2 hours	1.5 hours
To handle:	48 hours	8 hours	4.5 hours
To recoat:			
minimum:	48 hours	8 hours	4.5 hours
maximum:	1 year	1 year	1 year
To cure:			
Service:	10 days	7 days	4 days
Immersion:	14 days	7 days	4 days

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.
Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	10 hours	4 hours	2 hours
Sweat-in-time:	30 minutes	30 minutes	15 minutes

Shelf Life:	Part A 6 months, unopened Part B 36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	91°F (33°C), TCC, mixed
Reducer/Clean Up:	Reducer, R7K15
In California:	Reducer R7K111 or Oxsol 100

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. Macropoxy 646 MR @ 6.0 mils (150 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	84 mg loss
Adhesion	ASTM D4541	1,037 psi
Corrosion Weathering¹	ASTM D5894, 36 cycles, 12,000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 per rusting
Direct Impact Resistance²	ASTM D2794	120 in. lb.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Exterior Durability	1 year at 45° South	Excellent, chalks
Flexibility	ASTM D522, 180° bend, 3/4" mandrel	Passes
Humidity Resistance	ASTM D4585, 6000 hours	No blistering, cracking, or rusting
Immersion	1 year fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance¹	ASTM B117, 6,500 hours	Rating 10 per ASTM D610 for rusting; Rating 9 per ASTM D1654 for corrosion
Water Vapor Permeance	ASTM D1653, Method B	1.16 US perms

Epoxy coatings may yellow or discolor following application and curing.

Footnotes:

¹ Zinc Clad II Plus Primer

² Two coats of Macropoxy 646 MR Epoxy

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.



Protective & Marine Coatings

MACROPOXY® 646 MR

PART A
PART B

B58WZ610
B58V600

WHITE
HARDENER

Revised: August 1, 2017

PRODUCT INFORMATION

4.34

RECOMMENDED USES

- Marine applications
- Fabrication shops
- Pulp and paper mills
- Power plants
- Offshore platforms
- Refineries
- Chemical plants
- Tank exteriors
- Water treatment plants

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Immersion and atmospheric:			
Steel:			
2 cts.	Macropoxy 646 MR Epoxy	5.0-10.0	(125-250)
Concrete/Masonry, smooth:			
2 cts.	Macropoxy 646 MR Epoxy	5.0-10.0	(125-250)
Concrete Block:			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer <i>as needed to fill voids and provide a continuous substrate.</i>	10.0-20.0	(250-500)
2 cts.	Macropoxy 646 MR epoxy	5.0-10.0	(125-250)
Aluminum:			
2 cts.	Macropoxy 646 MR Epoxy	5.0-10.0	(125-250)
Galvanizing:			
2 cts.	Macropoxy 646 MR Epoxy	5.0-10.0	(125-250)

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Iron & Steel	
Atmospheric:	SSPC-SP2/3
Immersion:	SSPC-SP10/NACE 2, 2-3 mil (50-75 micron) profile
Aluminum:	SSPC-SP1
Galvanizing:	SSPC-SP1; See Surface Preparations section on page 3 for application of FIRETEX intumescent coating systems
Concrete & Masonry	
Atmospheric:	SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3
Immersion:	SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 2-4

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White Metal	Sa 3	SP 5	1
Near White Metal	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	SP 2	-
Pitted & Rusty	D St 2	SP 2	-
Rusty	C St 3	SP 3	-
Pitted & Rusty	D St 3	SP 3	-

TINTING

Not recommended

APPLICATION CONDITIONS

Temperature:	35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface) 40°F (4.5°C) minimum, 120°F (49°C) maximum (material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	
Part A:	5 gallon (18.9L) container
Part B:	5 gallon (18.9L) container
Weight:	12.9 ± 0.2 lb/gal ; 1.55 Kg/L mixed, may vary by color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Protective & Marine Coatings

MACROPOXY® 646 MR

PART A
PART B

B58WZ610
B58V600

WHITE
HARDENER

Revised: August 1, 2017

APPLICATION BULLETIN

4.34

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel, Atmospheric Service:

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Iron & Steel, Immersion Service:

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2-3 mils / 50-75 microns). Remove all weld spatter and round all sharp edges by grinding. Prime any bare steel the same day as it is cleaned.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. In preparing galvanized steel substrates for the application of FIRE-TEX intumescent coating systems, Surface Preparation Specification SSPC-SP 16 must be followed obtaining a surface profile of minimum 1.5 mils (38 microns). Optimum surface profile will not exceed 2.0 mils (50 microns).

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910.

Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 2-4.

Follow the standard methods listed below when applicable:

ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.

SSPC-SP 13/Nace 6 Surface Preparation of Concrete.

ICRI No. 310.2R Concrete Surface Preparation.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

APPLICATION CONDITIONS

Temperature: 35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface)
40°F (4.5°C) minimum, 120°F (49°C) maximum (material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up Reducer R7K15
In California..... Reducer R7K111

Airless Spray

Pump..... 30:1
Pressure..... 2800 - 3000 psi
Hose..... 1/4" ID
Tip017" - .023"
Filter 60 mesh
Reduction..... As needed up to 10% by volume

Conventional Spray

Gun DeVilbiss MBC-510
Fluid Tip E
Air Nozzle..... 704
Atomization Pressure..... 60-65 psi
Fluid Pressure..... 10-20 psi
Reduction..... As needed up to 10% by volume
Requires oil and moisture separators

Brush

Brush..... Nylon/Polyester or Natural Bristle
Reduction..... Not recommended

Roller

Cover 3/8" woven with solvent resistant core
Reduction..... Not recommended

Plural Component Spray ... Acceptable

Refer to April 2010 Technical Bulletin - "Application Guidelines for Macropoxy 646 Fast Cure Epoxy & Recoatable Epoxy Primer Utilizing Plural Component Equipment"

If specific application equipment is not listed above, equivalent equipment may be substituted.

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	SSPC	NACE
White Metal	Sa 3	SP 5	1
Near White Metal	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	SP 2	-
Rusted	D St 2	SP 2	-
Pitted & Rusted	C St 3	SP 3	-
Rusted	D St 3	SP 3	-
Pitted & Rusted	D St 3	SP 3	-



Protective & Marine Coatings

MACROPOXY® 646 MR

PART A
PART B

B58WZ610
B58V600

WHITE
HARDENER

Revised: August 1, 2017

APPLICATION BULLETIN

4.34

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine one part by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated prior to application. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed, after sweat-in.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0 (125)	10.0 (250)
~Coverage sq ft/gal (m ² /L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1152 (28.2)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.0 mils wet (175 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4-5 hours	2 hours	1.5 hours
To handle:	48 hours	8 hours	4.5 hours
To recoat:			
minimum:	48 hours	8 hours	4.5 hours
maximum:	1 year	1 year	1 year
To cure:			
Service:	10 days	7 days	4 days
Immersion:	14 days	7 days	4 days

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life: 10 hours 4 hours 2 hours

Sweat-in-time: 30 minutes 30 minutes 15 minutes

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer R7K15. Clean tools immediately after use with Reducer R7K15. In California use Reducer R7K111. Follow manufacturer's safety recommendations when using any solvent.

PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer R7K15. In California use Reducer R7K111.

Insufficient ventilation, incomplete mixing, miscatalyzation, and external heaters may cause premature yellowing.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

Quik-Kick Epoxy Accelerator is acceptable for use. See data page 4.99 for details.

When coating over aluminum and galvanizing, recommended dft is 2-4 mils (50-100 microns).

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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WARRANTY

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Protective & Marine Coatings

EPOXY MASTIC ALUMINUM II

PART A
PART B

B62S100
B60V100

ALUMINUM
HARDENER

Revised: January 16, 2015

PRODUCT INFORMATION

4.60

PRODUCT DESCRIPTION

EPOXY MASTIC ALUMINUM II is a high solids, aluminum filled, polyamine bisphenol A epoxy coating formulated to provide a high performance system over marginally prepared steel surfaces.

- Outstanding adhesion over marginally prepared surfaces
- Chemical and moisture barrier
- As a barrier or universal primer when applying high performance coatings over alkyds, to prevent lifting
- Low temperature application (35°F / 1.6°C)
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Aluminum
Volume Solids:	78% ± 2%, mixed ASTM D2697 (disk method) 80% ± 2%, mixed, calculated ASTM D5201
Weight Solids:	89% ± 2%, mixed
VOC (EPA Method 24): mixed	Unreduced: <180 g/L; 1.50 lb/gal Reduced 10%: <235 g/L; 1.96 lb/gal
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 (125)	7.5 (188)
Dry mils (microns)	4.0* (100)	6.0* (150)
~Coverage sq ft/gal (m ² /L)	214 (5.2)	320 (7.8)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1248 (30.5)	

*See Performance Tips section

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.5 mils wet (188 microns):

	@ 35°F/1.6°C	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	20 hours	10 hours	4 hours	1 hour
Tack free:	60 hours	24 hours	8 hours	3 hours
To recoat:				
minimum:	4 days	24 hours	8 hours	3 hours
maximum:	1 year	1 year	1 year	1 year
To cure:	21 days	21 days	10 days	7 days

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.

Pot Life:	6 hours	5 hours	3 hours	1.5 hours
Sweat-in-time:	45 minutes	30 minutes	15 minutes	10 minutes

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	102°F (39°C), PMCC, mixed
Reducer/Clean Up:	
Below 80°F (27°C):	Xylene, R2K4
Above 80°F (27°C):	Reducer #100, R7K100

RECOMMENDED USES

For use over marginally prepared substrates such as steel, aluminum, and galvanizing in industrial environments.

- Primer / topcoat for ferrous surfaces
- As a primer over rusted / pitted steel when abrasive blasting is not possible
- Where chemical and moisture resistance is needed in a high build coating
- Marine applications
- Storage tanks
- Refineries
- Conforms to AWWA D102 OCS #5

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Epoxy Mastic Aluminum II @ 5.0 mils (125 microns) dft/ct

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	124 mg loss
Adhesion	ASTM D4541	1000+ psi
Direct Impact Resistance	ASTM D2794, 1/4" steel	160 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Exterior Durability	1 year at 45° South	Excellent, chalks
Flexibility	ASTM D522, 180° bend, 3/4" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 1500 hours	No blisters, rust, or delamination
Pencil Hardness	ASTM D3363	2H
Salt Fog Resistance	ASTM B117, 1000 hours	No blistering, cracking, softening, or delamination. No more than 1/8" rust creepage. Rating 10 per ASTM D610 for rusting.
Water Resistance	ASTM D1735, 2000 hours	No blistering, cracking, softening, or delamination. Rating 10 per ASTM D610 for rusting. Rating 10 per ASTM D714 for blistering.

Epoxy coatings may darken or yellow following application and curing.



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PART B

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PRODUCT INFORMATION

4.60

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel, light/moderate service:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
Steel, severe service:			
2 cts.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
Steel, high build epoxy topcoat:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1-2 cts.	Tile-Clad HS Epoxy	2.5-4.0	(63-100)
Steel, acrylic latex topcoat:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1-2 cts.	Pro Industrial DTM Acrylic Coating	2.5-4.0	(63-100)
Steel, polyurethane topcoat:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1 ct.	Acrolon 218 HS Polyurethane	3.0-6.0	(75-150)
Aluminum / Galvanized Metal:			
1 ct.	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)

Check minimum application temperatures of primers and topcoats prior to use.

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Iron & Steel:	SSPC-SP2
Aluminum:	SSPC-SP1
Galvanizing:	SSPC-SP1

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusty	D St 2	D St 2	SP 2	-
Rusty	C St 3	C St 3	SP 3	-
Power Tool Cleaning	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	35°F (1.6°C) minimum, 120°F (49°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	
Parts A & B:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Weight:	12.99 ± 0.2 lb/gal ; 1.56 Kg/L, mixed

SAFETY PRECAUTIONS

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APPLICATION BULLETIN

4.60

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Previously Painted Surfaces:

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

APPLICATION CONDITIONS

Temperature: 35°F (1.6°C) minimum, 120°F (49°C) maximum
(air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up

Below 80°FXylene, R2K4
Above 80°FReducer #100, R7K100

Airless Spray (use Teflon packings)

Pressure.....2800-3000 psi
Hose.....3/8" - 1/2" ID
Tip0.021"
Filter30 mesh
Reduction.....As needed up to 10% by volume

Conventional Spray

GunBinks 95
Fluid Nozzle68
Air Nozzle.....68 PB
Atomization Pressure.....55 psi
Fluid Pressure.....35 psi
Reduction.....As needed up to 10% by volume

Brush

Brush.....Nylon/Polyester or Natural Bristle
Reduction.....Not recommended

Roller

Cover3/8" - 1/2" woven with solvent resistant core
Reduction.....not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusty	D St 2	D St 2	SP 2	-
Rusty	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusty	D St 3	D St 3	SP 3



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PART A
PART B

B62S100
B60V100

ALUMINUM
HARDENER

Revised: January 16, 2015

APPLICATION BULLETIN

4.60

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine one part by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed (after sweat-in).

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 (125)	7.5 (188)
Dry mils (microns)	4.0* (100)	6.0* (150)
~Coverage sq ft/gal (m ² /L)	214 (5.2)	320 (7.8)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1248 (30.5)	

*See Performance Tips section

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.5 mils wet (188 microns):

	@ 35°F/1.6°C	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	20 hours	10 hours	4 hours	1 hour
Tack free:	60 hours	24 hours	8 hours	3 hours
To recoat:				
minimum:	4 days	24 hours	8 hours	3 hours
maximum:	1 year	1 year	1 year	1 year
To cure:	21 days	21 days	10 days	7 days
<i>If maximum recoat time is exceeded, abrade surface before recoating.</i>				
<i>Drying time is temperature, humidity, and film thickness dependent.</i>				
Pot Life:	6 hours	5 hours	3 hours	1.5 hours
Sweat-in-time:	45 minutes	30 minutes	15 minutes	10 minutes

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.

Do not use on sheet galvanizing.

Do not use on roofs.

Do not topcoat with alkyd or epoxy ester finishes.

Do not apply to damp surfaces.

May be applied at a relative humidity of up to 95%. Note: Condensation forming on the coating during curing may result in longer cure times, solvent entrapment, premature failure, discoloration, or a surface haze or blush that must be removed before recoating.

When coating over aluminum and galvanizing, recommended dft is 2-4 mils (50-100 microns).

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

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