



Protective RECOATABLE EPOXY PRIMER

& Marine Coatings

| | | |
|--------|-----------|------------|
| PART G | B67A5 | LIGHT GRAY |
| PART G | B67H5 | TAN |
| PART G | B67R5 | RED OXIDE |
| PART G | B67WJ5000 | WHITE |
| PART H | B67V5 | HARDENER |

Revised: April 15, 2016

PRODUCT INFORMATION

4.45

PRODUCT DESCRIPTION

RECOATABLE EPOXY PRIMER is a rust inhibitive high build catalyzed polyamide/bisphenol A epoxy primer designed for fast dry and quick or extended recoatability.

- Meets Class A requirements for Slip Coefficient, .50 (Red Oxide only)
- Long pot life
- High build coating for economical application
- One year recoatability
- Low temperature application - down to 35°F (1.5°C)
- Corrosion resistant (contains zinc phosphate)
- Outstanding application properties

PRODUCT CHARACTERISTICS

| | |
|-----------------------------|--|
| Finish: | Flat |
| Color: | Red Oxide, Tan, Light Gray, White |
| Volume Solids: | 65% ± 4%, mixed |
| Weight Solids: | 81% ± 2%, mixed |
| VOC (EPA Method 24): | Unreduced: <320 g/L; 2.67 lb/gal mixed Reduced 5%: <340 g/L; 2.88 lb/gal |
| Mix Ratio: | 1:1 by volume |

Recommended Spreading Rate per coat:

| | Minimum | Maximum |
|---|--------------------|-------------------|
| Wet mils (microns) | 6.0 (150) | 9.0 (225) |
| Dry mils (microns) | 4.0* (100) | 6.0* (150) |
| ~Coverage sq ft/gal (m²/L) | 175 (4.3) | 260 (6.4) |
| Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft | 1040 (25.5) | |

*See Performance Tips section

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

Drying Schedule @ 6.0 mils wet (150 microns):

| | @ 35°F/1.5°C | @ 77°F/25°C 50% RH | @ 120°F/49°C |
|---|--------------|-----------------------|--------------|
| To touch: | 1 hour | 15 minutes | 10 minutes |
| Tack free: | 2 hours | 30 minutes | 15 minutes |
| To recoat: | | | |
| minimum: | 6 hours | 2 hours | 30 minutes |
| maximum: | 1 year | 1 year | 1 year |
| To cure: | 14 days | 14 days | 2 days |
| <i>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</i> | | | |
| Pot Life: | 8+ hours | 8 hours | 3 hours |
| Sweat-in-time: | 1 hour | 30 minutes | 10 minutes |

Shelf Life: 36 months, unopened S t o r e indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 80°F (27°C), PMCC, mixed

Reducer/Clean Up:
Below 80°F (27°C): Reducer #54, R7K54 or R7K111
Above 80°F (27°C): Reducer #100, R7K100, R7K104, or R7K111

In California Reducer R7K111

RECOMMENDED USES

For use as a shop or field applied epoxy primer where a variable recoat window is required due to construction schedules, distribution logistics and environmental considerations. Affords flexibility in projects when completion schedules cannot be specified.

- Primer for structural steel
- Paper mills
- Power plants
- Suitable for use in USDA inspected facilities
- Nuclear Power Plants
- Nuclear fabrication shops
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.
- Marine applications
- Storage tanks
- DOE Nuclear Fuel Facilities
- DOE Nuclear Weapons Facilities

* Nuclear qualifications are NRC license specific to the facility.

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Recoatable Epoxy Primer @ 5.0 mils (125 microns) dft

*unless otherwise noted below

| Test Name | Test Method | Results |
|---|---|--|
| Abrasion Resistance | ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load | 200 mg loss |
| Accelerated Weathering - QUV¹ | ASTM D4587, QUV-A, 5,000 hours | Passes |
| Adhesion | ASTM D4541 | 1050 psi |
| Corrosion Weathering | ASTM D5894, 13 cycles, 4,368 hours | Rating 10 per ASTM D714 for Blistering; Rating 7 per ASTM D610 for Rusting |
| Direct Impact Resistance | ASTM D2794 | 160 in. lbs. |
| Dry Heat Resistance | ASTM D2485 | 250°F (121°C) (dis-colors) |
| Flexibility | ASTM D522, 180° bend, 1" mandrel | Passes |
| Moisture Condensation Resistance | ASTM D4585, 100°F (38°C), 2000 hours | Passes, no cracking or delamination |
| Pencil Hardness | ASTM D3363 | 3H |
| Salt Fog Resistance¹ | ASTM B117, 5,600 hours | Passes, no cracking or delamination |
| Slip Coefficient, Red Oxide** | AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts | Class A, 0.50 |
| Surface Burning* | ASTM E84/NFPA 255 | Flame Spread Index 15; Smoke Development Index 30 |

*System tested (Report No. IM54.1157-02-01):
Recoatable Epoxy Primer @ 4.6 mils (115 microns) dft
Macropoxy 646 @ 5.0 mils (125 microns) dft

**Refer to Slip Certification document

Epoxy coatings may darken or yellow following application and curing.

Provides performance comparable to products formulated to federal specifications: Mil-P-23377, Mil-P-53022

Footnotes:

¹ Acrolon 218 HS topcoat



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RECOMMENDED SYSTEMS

| | | Dry Film Thickness / ct. | |
|---|------------------------------------|--------------------------|-----------|
| | | Mils | (Microns) |
| Steel, catalyzed epoxy topcoat: | | | |
| 1 ct. | Recoatable Epoxy Primer | 4.0-6.0 | (100-150) |
| 2 cts. | Tile-Clad HS Epoxy | 2.5-4.0 | (63-100) |
| Steel, polyurethane topcoat: | | | |
| 1 ct. | Recoatable Epoxy Primer | 4.0-6.0 | (100-150) |
| 1-2 cts. | Hi-Solids Polyurethane | 3.0-4.0 | (75-100) |
| Steel, acrylic epoxy topcoat: | | | |
| 1 ct. | Recoatable Epoxy Primer | 4.0-6.0 | (100-150) |
| 2 cts. | Water Based Catalyzed Epoxy | 2.5-3.0 | (63-75) |
| Steel, acrylic topcoat: | | | |
| 1 ct. | Recoatable Epoxy Primer | 4.0-6.0 | (100-150) |
| 2 cts. | Pro Industrial DTM Acrylic Coating | 2.5-4.0 | (63-100) |
| Galvanized: | | | |
| 1 ct. | Recoatable Epoxy Primer | 4.0-6.0 | (100-150) |
| 2 cts. | Tile-Clad HS Epoxy | 2.5-4.0 | (63-100) |
| FIRETEX ONLY: | | | |
| Steel & Galvanized Substrates being primed for FIRETEX only: | | | |
| 1 ct. | Recoatable Epoxy Primer | 2.0-5.0 | (50-125) |

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

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.

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-SP6/NACE 3, 2 mil (50 micron) profile |
| Galvanizing*: | SSPC-SP1 |

*See Surface Preparations section on page 3 for application of FIRETEX intumescent coating systems

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 & Rusted | D St 2 | D St 2 | SP 2 | - |
| Rusted | C St 3 | C St 3 | SP 3 | - |
| Power Tool Cleaning | Pitted & Rusted | D St 3 | D St 3 | SP 3 |

TINTING

Do not tint.

APPLICATION CONDITIONS

| | |
|--------------------|---|
| Temperature: | |
| air and surface: | 35°F (1.6°C) minimum, 140°F (60°C) maximum |
| material: | 50°F (10°C) minimum 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 G: | 1 gallon (3.78L) and 5 gallon (18.9L) containers |
| Part H: | 1 gallon (3.78L) and 5 gallon (18.9L) containers |
| Weight: | 13.26 ± 0.2 lb/gal ; 1.6 Kg/L, mixed |

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.



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APPLICATION BULLETIN

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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)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. 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 FIRETEX 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).

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.

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 | Rusted C St 2 | C St 2 | SP 2 | - |
| | Pitted & Rusted D St 2 | D St 2 | SP 2 | - |
| Power Tool Cleaning | Rusted C St 3 | C St 3 | SP 3 | - |
| | Pitted & Rusted D St 3 | D St 3 | SP 3 | - |

APPLICATION CONDITIONS

| | |
|--------------------|---|
| Temperature: | |
| air and surface: | 35°F (1.6°C) minimum, 140°F (60°C) maximum |
| material: | 50°F (10°C) minimum 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°F (27°C) | Reducer #54, R7K54 or R7K111 |
| Above 80°F (27°C) | Reducer #100, R7K100, R7K104 or R7K111 |
| In California | Reducer R7K111 |

Airless Spray

| | |
|-----------------|------------------------------|
| Pressure | 2400 psi |
| Hose | 1/4" ID |
| Tip | .017" |
| Filter | 60 mesh |
| Reduction | As needed up to 5% by volume |

Conventional Spray

| | |
|----------------------------|------------------------------|
| Gun | Binks |
| Fluid Nozzle | 66 |
| Air Nozzle | 63PB |
| Atomization Pressure | 50 psi |
| Fluid Pressure | 12-20 psi |
| Reduction | As needed up to 5% by volume |

Brush

| | |
|-----------------|-----------------|
| Brush | Natural Bristle |
| Reduction | Not recommended |

Roller

| | |
|-----------------|---|
| Cover | 3/8" - 1/2" woven with solvent resistant core |
| Reduction | Not recommended |

Plural Component Spray ...Acceptable

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

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



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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 cans. Then combine one part by volume of Part G with one part by volume of Part H. 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) | 6.0 (150) | 9.0 (225) |
| Dry mils (microns) | 4.0* (100) | 6.0* (150) |
| ~Coverage sq ft/gal (m ² /L) | 175 (4.3) | 260 (6.4) |
| Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft | 1040 (25.5) | |

*See Performance Tips section

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

Drying Schedule @ 6.0 mils wet (150 microns):

| | @ 35°F/1.5°C | @ 77°F/25°C 50% RH | @ 120°F/49°C |
|---|--------------|-----------------------|--------------|
| To touch: | 1 hour | 15 minutes | 10 minutes |
| Tack free: | 2 hours | 30 minutes | 15 minutes |
| To recoat: | | | |
| minimum: | 6 hours | 2 hours | 30 minutes |
| maximum: | 1 year | 1 year | 1 year |
| To cure: | 14 days | 14 days | 2 days |
| <i>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</i> | | | |
| Pot Life: | 8+ hours | 8 hours | 3 hours |
| Sweat-in-time: | 1 hour | 30 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 Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. 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.

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 Reducer #54, R7K54.

Material must be at least 50°F (10°C) prior to catalyzing.

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.

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