



Protective & Marine Coatings



STEEL SPEC™ EPOXY PRIMER

PART A
PART B

B58R8
B58V8

BASE
HARDENER

Revised 9/09

PRODUCT INFORMATION

4.44

PRODUCT DESCRIPTION

STEEL SPEC EPOXY PRIMER is the industrial coatings market's first non-zinc containing, Class B-rated, polyamide epoxy coating for slip coefficient performance and bolted connections per ASTM and AISC specifications.

- Fast dry with fast handle time
- Corrosion resistant
- Meets Class B requirements for Slip Coefficient and Creep Resistance, .52
- Low VOC
- Low temperature application down to 35°F (1.5°C)
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Red oxide
Volume Solids:	62% ± 2%, mixed
Weight Solids:	78% ± 2%, mixed
VOC (EPA Method 24):	Unreduced: <340 g/L; 2.80 lb/gal mixed Reduced 5%: <340 g/L; 2.83 lb/gal
Mix Ratio:	1:1

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)	176 4.3	260 6.4
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	992 24.3	

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	1 hour	15 minutes
To recoat:			
minimum:	6 hours	2 hours	30 minutes
maximum:	1 year	1 year	1 year
To cure:	14 days	7 days	3 days

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

Pot Life:	8 hours	6 hours	2 hours
Sweat-in-time:	1 hour	30 minutes	10 minutes

Shelf Life:	Part A - 24 months, unopened Part B - 36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	84°F (29°C), PMCC, mixed
Reducer/Clean Up:	
Below 80°F (27°C):	R7K54
Above 80°F (27°C):	R7K100

RECOMMENDED USES

- Appropriate for structural and support steel
- Compliant with Class B Slip Coefficient rating when used alone or as part of a system over Zinc Clad II Plus, Zinc Clad II LV, Zinc Clad III HS, and Galvapac MCU
- Appropriate coating for
 - Power plants
 - Marine applications
 - Bridges
- Tested in accordance with ASTM F1679-96 (VIT method); results >.60 (wet or dry, with or without SharkGrip)
- Suitable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

- 1 ct. Steel Spec Epoxy Primer @ 4.0-6.0 mils (100-150 microns) dft
- 1 ct. Acrolon 218 HS @ 3.0-6.0 mils (75-150 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance (primer only)	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	288 mg loss
Adhesion (SSPC-SP10)	ASTM D4541	1180 psi
Corrosion Weathering	ASTM D5894, 500 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Direct Impact Resistance (primer only)	ASTM G14	20 in. lb.
Dry Heat Resistance	ASTM D2485, Method A	250°F (121°C)
Flexibility (primer only)	ASTM D522, 180° bend	Passes 3/4 mandrel, 6.5% elongation
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 500 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Pencil Hardness (primer only)	ASTM D3363	HB
Salt Fog Resistance	ASTM B117, 500 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Slip Coefficient (primer only)	AISC Specification for Structural Joints using ASTM A325 or ASTM A490 Bolts	Passes Class B, .52
Slip Coefficient¹	AISC Specification for Structural Joints using ASTM A325 or ASTM A490 Bolts	Passes Class B, .56

Footnotes:

- ¹ 1 ct. Zinc Clad II Plus @ 2.0 - 4.0 mils (50-100 microns) dft
- 1 ct. Steel Spec Epoxy Primer @ 4.0 - 6.0 mils (100-150 microns) dft



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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel:			
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Tile-Clad HS Epoxy	2.5-4.0	(63-100)
Steel:			
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Acrolon 218 HS	3.0-6.0	(75-150)
Steel:			
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)
1 ct.	Macropoxy 646	6.0-10.0	(150-250)
Steel:			
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)
2 cts.	Water Based Catalyzed Epoxy	2.5-3.0	(63-75)
Steel:			
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)
2 cts.	DTM Acrylic Coating	2.5-4.0	(63-100)
Steel (Class B Compliant System):			
1 ct.	Zinc Clad II Plus*	2.0-4.0	(50-100)
1 ct.	Steel Spec Epoxy Primer	4.0-6.0	(100-150)

*Other acceptable primers for Class B Compliant System:

- Zinc Clad II LV
- Zinc Clad III HS
- Galvapac MCU

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

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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

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	OC St 2	OC St 2	SP 2	-
Pitted & Rusty	OC St 2	OC St 2	SP 2	-
Power Tool Cleaning	OC St 3	OC St 3	SP 3	-
Rusted	OC St 3	OC St 3	SP 3	-
Pitted & Rusty	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:
Air and surface: 35°F (1.5°C) minimum, 120°F (49°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 A: 1 gallon (3.78L) and 5 gallon (18.9L) containers
- Part B: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 12.59 ± 0.4 lb/gal ; 1.5 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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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:

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). Remove all weld spatter and round all sharp edges. Prime any bare steel within 8 hours or before flash rusting occurs.

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 (1.5°C) minimum, 120°F (49°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)R7K54
Above 80°F (27°C)R7K100

Airless Spray

Pressure.....2400 psi
Hose.....1/4" ID
Tip0.017" - .021"
Filter60 mesh
Reduction.....As needed up to 5% by volume

Brush

Brush.....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.



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: 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 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)	6.0 150	9.0 225
Dry mils (microns)	4.0 100	6.0 150
~Coverage sq ft/gal (m²/L)	176 4.3	260 6.4
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	992 24.3	

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	1 hour	15 minutes
To recoat:			
minimum:	6 hours	2 hours	30 minutes
maximum:	1 year	1 year	1 year
To cure:	14 days	7 days	3 days

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

Pot Life:	8 hours	6 hours	2 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 R7K54 (below 80°F / 27°C) or R7K100 (above 80°F / 27°C). Clean tools immediately after use with Reducer R7K54 (below 80°F / 27°C) or R7K100 (above 80°F / 27°C). 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 mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

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

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

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