THE SHERWIN-WILLIAMS COMPANY

Industrial and Marine Coatings

INDUSTRIAL & MARINE COATINGS

4.72

TARGUARD™
COAL TAR EPOXY

PART A	B69B60	BLACK
PART A	B69R60	RED
PART B	B69V60	HARDENER

PRODUCT INFORMATION

Revised 1/02

PRODUCT DESCRIPTION

TARGUARD COAL TAR EPOXY is a high build, polyamide epoxy coal tar coating.

Meets the following specifications:
- Corps of Engineers Formula C-200a
- SSPC Paint 16-91T Specification

RECOMMENDED USES

For use over prepared substrates such as steel and concrete in industrial environments.
- Penstocks
- Dam gates
- Petroleum storage tanks
- Heavy duty structural coating
- Non-potable water tank and pipe coating
- Acceptable for use with cathodic protection systems
- Liner for clarifiers
- Marine applications
- Offshore drilling rigs

PRODUCT CHARACTERISTICS

Finish: Semi-Gloss

Color: Black, Red

Volume Solids: 74% ± 2%, mixed

Weight Solids: 82% ± 2%, mixed

VOC (calculated): mixed
Unreduced: 225 g/L; 1.88 lb/gal
Reduced 10%: 264 g/L; 2.36 lb/gal

Mix Ratio: 2 component, premeasured 4:1
5 gallons mixed

Recommended Spreading Rate per coat:

Wet mils:	11.0 - 22.0
Dry mils:	8.0 - 16.0
Coverage:	74 - 148 sq ft/gal approximate

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

Drying Schedule @ 11.0 mils wet @ 50% RH:

	@ 50°F	@ 77°F	@100°F
To touch:	14 hours	8 - 10 hours	2 hours
To recoat:			
minimum:	48 hours	18 hours	5 hours
maximum:	72 hours	72 hours	12 hours
To cure:	7-10 days	7-10 days	2 days
Pot Life:	2-1/2 hours	2 hours	1 hour
Sweat-in-Time:	15 minutes	10 minutes	none

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

Shelf Life: 8 months, unopened, at 77°F

Flash Point: 82°F, PMCC, mixed

Reducer/Clean Up: Xylene, R2K4

PERFORMANCE CHARACTERISTICS

System Tested: (unless otherwise indicated)
Substrate: Steel
Surface Preparation: SSPC-SP6
1 ct. TarGuard Coal Tar Epoxy @ 10.0 mils dft

Abrasion Resistance:
Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load
Result: 137 mg loss

Adhesion:
Method: ASTM D4541
Result: 1000 psi

Direct Impact Resistance:
Method: ASTM D2794
Result: 36 in. lbs.

Dry Heat Resistance:
Method: ASTM D2485
Result: 250°F

Moisture Condensation Resistance:
Method: ASTM D4585, 100°F, 3000 hours
Result: Excellent

Pencil Hardness:
Method: ASTM D3363
Result: F

Salt Fog Resistance:
Method: ASTM B117, 3000 hours
Result: Excellent

Thermal Shock:
Method: ASTM D2246, 100 cycles
Result: Excellent

Wet Heat Resistance:
Method: Non-immersion
Result: 120°F

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RECOMMENDED SYSTEMS

Concrete, atmospheric or immersion:
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

Steel, atmospheric or immersion:
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

Steel, atmospheric or immersion:
1 ct. Copoxy Shop Primer @ 3.0 - 5.0 mils dft
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

Steel, zinc rich primer, atmospheric only:
1 ct. Zinc Clad II HS @ 3.0 mils dft
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

Aluminum, atmospheric only:
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

Galvanized Metal, atmospheric only:
2 cts. TarGuard Coal Tar Epoxy @ 8.0 - 16.0 mils dft/ct

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-SP6, 2 mil profile
Immersion:	SSPC-SP10, 3 mil profile
Aluminum:	Brush Blast, 2 mil profile
Galvanizing:	Brush Blast, 2 mil profile
Concrete & Masonry:	
Atmospheric:	SSPC-SP13/NACE 6
Immersion:	SSPC-SP13/NACE 6-4.3.1 or 4.3.2

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	50°F minimum, 100°F maximum (air, surface, and material)
	At least 5°F above dew point
Relative humidity:	90% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	5 gallons mixed
Part A:	4 gallons in a 5 gallon container
Part B:	1 gallon
Weight per gallon:	10.7 ± 0.2 lb, 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.

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APPLICATION BULLETIN

Revised 1/02

SURFACE PREPARATION

General 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 good adhesion.

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 or SSPC-SP12/NACE No. 5. For SSPC-SP10, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (3 mils). For SSPC-SP12/NACE No. 5, all surfaces to be coated shall be cleaned in accordance with WJ-2/SC-2 standards. Pre-existing profile should be approximately 3 mils. Remove all weld spatter and round all sharp edges by grinding to a minimum 1/4" radius. Prime any bare steel the same day as it is cleaned.

Iron & Steel, Atmospheric Service:
Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6 or SSPC-SP12/NACE No. 5. For surfaces prepared by SSPC-SP6, first remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). For surfaces prepared by SSPC-SP12/NACE No. 5, all surfaces shall be cleaned in accordance with WJ-3/SC-2. Pre-existing profile should be approximately 2 mils. Prime any bare steel the same day as it is cleaned.

Galvanized Steel/Aluminum
Allow to weather a minimum of six months prior to coating. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1 (recommended solvent is VM&P Naphtha). Lightly brush blast per SSPC-SP 7 to provide a 2 mil profile.

Concrete/Masonry, Atmospheric Service:

New
For surface preparation, refer to SSPC-SP13/NACE 6. Surface must be clean, dry, sound, and offer sufficient profile to achieve adequate adhesion. Minimum substrate cure is 28 days at 75°F. Remove all form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. Refer to ASTM D4260. Rinse thoroughly to achieve a final pH between 6.0 and 10.0. Allow to dry thoroughly prior to coating.

Old
Surface preparation is done in much the same manner as new concrete; however, if the concrete is contaminated with oils, grease, chemicals, etc., they must be removed by cleaning with a strong detergent. Refer to ASTM D4258. Form release agents, hardeners, etc. must be removed by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. If surface deterioration presents an unacceptably rough surface, Kem Cati-Coat HS Epoxy Filler/Sealer is recommended to patch and resurface damaged concrete.

Concrete/Masonry, Immersion Service:
For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 4.3.2.

Always follow the industry standards listed below:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM D4263 Plastic Sheet Method for Checking Moisture in Concrete.
SSPC-SP13/NACE 6 Surface Preparation of Concrete

APPLICATION CONDITIONS

Temperature:	50°F minimum, 100°F maximum (air, surface, and material) At least 5°F above dew point
Relative humidity:	90% 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 compatible with the existing environmental and application conditions.

Reducer/Clean Up ..... Xylene, R2K4

Airless Spray
- Pressure ..... 3000 psi
- Hose ..... 3/8" - 1/2" ID
- Tip ..... .017" - .025"
- Filter ..... None
- Reduction ..... As needed up to 10% by volume

Conventional Spray (bottom feed tank recommended)
- Gun ..... Binks 95
- Fluid Nozzle 66
- Air Nozzle 63PB
- Atomization Pressure ... 60 psi
- Fluid Pressure ..... 40 psi
- Reduction ..... As needed up to 10% by volume

Brush
- Brush ..... Small areas only; natural bristle
- Reduction ..... Not recommended

Roller
- Cover ..... Small areas only; 3/8" - 1/2" woven with phenolic core
- Reduction ..... Not recommended

If specific application equipment is listed above, equivalent equipment may be substituted.

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APPLICATION BULLETIN

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with power agitation. Make certain no pigment remains on the bottom of the can. Then combine four parts 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:

Wet mils:	11.0 - 22.0
Dry mils:	8.0 - 16.0
Coverage:	74 - 148 sq ft/gal approximate

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

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Pot Life:	2-1/2 hours	2 hours	1 hour
Sweat-in-Time:	15 minutes	10 minutes	none

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

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

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 Xylene, R2K4.

Coating must be fully cured before placing into immersion service.

Holiday Detection: Use a wet sponge-type detector such as KD Bird Dog or equivalent equipment per manufacturer's recommendation. Test only cured coating, as solvent entrapment in fresh films may provide false readings.

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

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

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.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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