



Protective & Marine Coatings

COPPER BOTTOM ANTI-FOULING PAINT #45

N51-45 SERIES

Revised: October 21, 2019

PRODUCT INFORMATION

9.07

PRODUCT DESCRIPTION

COPPER BOTTOM ANTI-FOULING PAINT #45 is a semi-hard, anti-fouling developed for the shallow draft trade. It offers a moderately high concentration loading of cuprous oxide and a chemically modified binder that only slightly dissolves upon immersion service.

- Suitable for a wide range of operating performance
- Apply over existing vinyl antifouling coatings

PRODUCT CHARACTERISTICS

Finish:	Matte <30 units at 60°
Color:	Red, Black, Blue
Volume Solids:	53% ± 2%, calculated
Weight Solids:	80% ± 2%
Cuprous Oxide:	45% by weight
VOC:	Unreduced: <400g/L; 3.33 lb/gal Reduced 3.3%: <420 g/l; 3.5 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 100	5.0 125
Dry mils (microns)	2.0 50	2.5 63
~Coverage sq ft/gal (m²/L)	340 8.3	425 10.4
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	848 20.8	

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

Drying Schedule @ 4.0 mils wet (100 microns):

@ 77°F/25°C
50% RH

To touch:	1 hour
To recoat:	4 hours
Through dry:	8 hours
Dry to service:	8 hours

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

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
Reducer/Clean Up:	
Warm weather:	Mineral Spirits, R1K4
Cold weather:	Xylene, R2K4

RECOMMENDED USES

Used for moderate tropical fouling conditions where a moderately high concentration loading of cuprous oxide is required.

Used as an anti-fouling coating over prepared and primed surfaces such as steel, wood, aluminum, fiberglass, and previously painted surfaces coated with anti-fouling paint.

PERFORMANCE CHARACTERISTICS

- The loading of active cuprous oxide is balanced for economical use and moderate service life
- Extensively tested in fouling conditions of Biscayne Bay, Miami, FL
- Formulated to be applied directly over existing coatings, including vinyl anti-fouling coatings
- A slight algae film formation occurs at approximately 18 months. This is normal and has no detrimental effect on the anti-fouling performance. Wave action or slight scrubbing will readily remove the algae film.



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel:		
2 cts. Seaguard 5000 HS Epoxy OR	4.0-7.0	(100-175)
2 cts. Copper Bottom Anti-Fouling Paint #45	2.0-2.5	(50-63)
Previously Painted:		
2 cts. Copper Bottom Anti-Fouling Paint #45	2.0-2.5	(50-63)
Aluminum:		
1 ct. Seaguard MP Epoxy	3.0-4.0	(75-100)
2 cts. Seaguard 5000 HS Epoxy	4.0-7.0	(100-175)
2 cts. Copper Bottom Anti-Fouling Paint #45	2.0-2.5	(50-63)
Wood:		
1 ct. Seaguard 5000 HS Epoxy	4.0-7.0	(100-175)
2 cts. Copper Bottom Anti-Fouling Paint #45	2.0-2.5	(50-63)
Fiberglass:		
1 ct. suitable fiberglass primer Contact you Sherwin-Williams Marine Representative		
2 cts. Copper Bottom Anti-Fouling Paint #45	2.0-2.5	(50-63)

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-SP10/NACE 2, 2 mil (50 micron) profile
- * Aluminum: SSPC-SP1
- * Wood: SSPC-SP1
- * Fiberglass: SSPC-SP1
- Previously Painted: Clean, dry, sound
- * Requires primer

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

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature: 50°F (10°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: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 16.0 ± 0.2 lb/gal ; 1.92 Kg/L
may vary with color

SAFETY PRECAUTIONS

Refer to the SDS 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.

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.



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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.

To prepare the surface for coating, remove all old coating and fouling residue by either washing with high pressure water, scraping, or by disc sanding. Be sure to use the proper protective equipment to prevent inhalation or ingestion of the paint dust generated.

Iron & Steel

Minimum surface preparation is Near White Metal Blast Clean per SSPC-SP10/NACE 2 (2 mil / 50 micron profile). Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Remove all weld spatter and round all sharp edges. 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. Brush blast as needed. Primer required.

Fiberglass:

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Sand surface with 80 or 100 grit sandpaper. Use a tack cloth to clean surface of dust. Wipe entire surface with premium grade mineral spirits or suitable solvent. Apply appropriate primer.

Wood:

Surface must be clean, dry, and sound. Prime with recommended primer.

Previously Painted, Intact, Anti-fouling Coating:

If in sound condition, clean the surface of all foreign material. Use a high pressure water wash and allow to dry thoroughly.

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	CSt 2	CSt 2	SP 2	-
	Pitted & Rusted	DSt 2	DSt 2	SP 3	-
Power Tool Cleaning	Rusted	CSt 3	CSt 3	SP 3	-
	Pitted & Rusted	DSt 3	DSt 3	SP 3	-

APPLICATION CONDITIONS

Temperature: 50°F (10°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

Warm weather:.....Mineral Spirits, R1K4
Cool weather:.....Xylene, R2K4

Airless Spray

Unit.....30:1 Pump
Pressure.....2500 psi
Hose.....3/8" ID
Tip021"
Filter30 mesh
Reduction.....As needed, up to 3.3% by volume

Conventional Spray

GunBinks 95
Fluid Tip#66, external mix
Air Nozzle.....65 needle, 66PE Cap
Atomization Pressure.....30-40 psi
Fluid Pressure.....10-20 psi
Hose.....3/8" ID
Reduction.....As needed, up to 3% by volume
Limit hose runs to the minimum required. When spraying, keep the pot as close to the work as possible. For elevated applications, keep the pot at the same elevation as the spray gun.

Brush

Brush.....Natural Bristle
Reduction.....As needed, up to 3% by volume

Roller

Cover3/8" woven with solvent resistant core
Reduction.....As needed, up to 3% by volume

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 the coating with either a high speed mixer or a paint shaker for a minimum of five minutes to ensure complete pigment reincorporation. Make certain no pigment remains on the bottom or sides of the cans.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 100	5.0 125
Dry mils (microns)	2.0 50	2.5 63
~Coverage sq ft/gal (m²/L)	340 8.3	425 10.4
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

@ 77°F/25°C

50% RH

To touch: 1 hour

To recoat: 4 hours

Through dry: 8 hours

Dry to service: 8 hours

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.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Mineral Spirits, R1K4. Clean tools immediately after use with Mineral Spirits, R1K4. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Stripe coat 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.

Do not apply the coating if undispersed pigment remains on the bottom or sides of the container.

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

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Mineral Spirits, R1K4.

Application of the first coat of Anti-fouling is applied to the epoxy primer while the primer is still tacky.

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

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