



Protective & Marine Coatings

DIRECT-TO-METAL ENAMEL

B55 SERIES

Revised 5/10

PRODUCT INFORMATION

2.25

PRODUCT DESCRIPTION

DIRECT-TO-METAL ENAMEL is a high-build alkyd coating with rust-inhibitive properties for application directly to bare steel.

- Good gloss and color retention
- Corrosion resistance and finish coat protection in one coat
- Outstanding long term flexibility
- Excellent application properties

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Wide range of colors available
Volume Solids:	41% ± 2%, may vary by color
Weight Solids:	59% ± 2%, may vary by color
VOC (calculated):	<450 g/L; 3.75 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 175	13.0 325
Dry mils (microns)	3.0 75	5.0 125
~Coverage sq ft/gal (m²/L)	131 3.2	188 4.6
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	656 16.1	

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

Drying Schedule @ 10.0 mils wet (250 microns):

	@ 77°F/25°C	@ 120°F/49°C
	50% RH	
To touch:	1.5 hours	1 hour
Tack free:	6 hours	1.5 hours
To recoat:	18 hours	18 hours
To cure:	7 days	7 days

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

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	101°F (38°C), PMCC
Reducer:	Not recommended
Clean Up:	VM&P Naphtha, R1K3

RECOMMENDED USES

For use over prepared steel in industrial environments.

- Interior / exterior
- New construction
- Railings
- Machinery
- Structural steel
- Steel doors
- Steel decking
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D102-03 OCS #1
- Primer / finish
- Repaints
- Storage tanks
- Bar joists
- Piping
- Fire escapes
- Conveyors

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

2 cts. Direct-to-Metal Enamel @ 3.0 mils (75 microns) dft/ct.
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	200 mg loss
Adhesion	ASTM D4541	300 psi
Direct Impact Resistance	ASTM G14	>30 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C) (discolors)
Exterior Durability	1 year, 45° South	Very good
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C)	Passes
Pencil Hardness	ASTM D3363	3B
Salt Fog Resistance	ASTM B117, 500 hours	Passes
Thermal Shock	ASTM D2246 (5 cycles)	Passes

Provides performance comparable to products formulated to federal specifications: MIL-E-15090, TT-E-485F



Protective & Marine Coatings

DIRECT-TO-METAL ENAMEL

B55 SERIES

PRODUCT INFORMATION

2.25

RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel, Light Service:		
1 ct. Direct-To-Metal Enamel	3.0-5.0	(75-125)
Steel, Moderate Service:		
2 cts. Direct-To-Metal Enamel	3.0-5.0	(75-125)

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

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	-

TINTING

Tint with Blend-A-Color Toner at 75% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature: 40°F (4.5°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: 9.2 ± 0.2 lb/gal, 1.10 Kg/L
may vary with 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.

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

DIRECT-TO-METAL ENAMEL

B55 SERIES

Revised 5/10

APPLICATION BULLETIN

2.25

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, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Coat any bare steel within 8 hours or before flash rusting occurs.

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: 40°F (4.5°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 Not recommended

Clean Up VM&P Naphtha, R1K3

Airless Spray

Pressure.....2000 psi
Hose.....3/8" ID
Tip......019"

Conventional Spray

Gun Binks 95
Fluid Nozzle 63B
Air Nozzle.....63PB
Atomization Pressure.....50 psi
Fluid Pressure.....20-25 psi

Brush

Brush..... Natural Bristle

Roller

Cover 3/8" woven with solvent resistant core

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	Rs 2	Rs 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	-



Protective & Marine Coatings

DIRECT-TO-METAL ENAMEL

B55 SERIES

APPLICATION BULLETIN

2.25

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

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	13.0 325
Dry mils (microns)	3.0 75	5.0 125
~Coverage sq ft/gal (m ² /L)	131 3.2	188 4.6
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	656 16.1	

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

Drying Schedule @ 10.0 mils wet (250 microns):

@ 77°F/25°C @ 120°F/49°C
50% RH

To touch:	1.5 hours	1 hour
Tack free:	6 hours	1.5 hours
To recoat:	18 hours	18 hours
To cure:	7 days	7 days

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 VM&P Naphtha, R1K3. Clean tools immediately after use with VM&P Naphtha, R1K3. Follow manufacturer's safety recommendations when using any solvent.

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.

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.

No reduction of material is recommended as it 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 VM&P Naphtha, R1K3.

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

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.