



ArmorSeal Heavy Duty Floor Coatings

ARMORSEAL® 1000 HS

PART A
PART B

B67-2000
B67V2002

SERIES
HARDENER

Revised 9/09

PRODUCT INFORMATION

8.22

PRODUCT DESCRIPTION

ARMORSEAL 1000 HS is a high solids, heavy duty, two-component, catalyzed, polyamide epoxy coating formulated for demanding marine and industrial requirements. Dries rapidly to a tough, high gloss finish with excellent resistance to alkalis, abrasion, corrosion, and chemical attack.

- Chemical Resistant
- Impact Resistant
- Abrasion Resistant
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Gloss
Color:	Clear, Haze Gray, Deck Gray, White, Sandstone, Tile Red, Safety Yellow, and a wide range of tinted colors
Volume Solids, mixed:	colors - 65% ± 2% may vary by color clear - 61% ± 2%
Weight Solids, mixed:	74% ± 2%, may vary by color
VOC (EPA Method 24), mixed, may vary by color:	Unreduced: <340 g/L; 2.8 lb/gal clear <400 g/L; 3.33 lb/gal
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 125	8.0 200
Dry mils (microns)	3.0 75	5.0 125
~Coverage sq ft/gal (m²/L)	206 5.0	350 8.6
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1040 25.5	

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

Drying Schedule @ 6.0 mils (150 microns):

	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	4 hours	2 hours	30 minutes
To recoat:			
minimum:	24 hours	8 hours	4 hours
maximum:	7 days	7 days	7 days
Foot traffic:	48 hours	24 hours	12 hours
Heavy traffic:	4-5 days	48-72 hours	24-36 hours
To cure:	10 days	7 days	4 days
<i>If maximum recoat time is exceeded, abrade surface before topcoating.</i>			
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	2 hours	30 minutes	10 minutes

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
Flash Point:	>105°F (41°C), Seta, mixed
Reducer/Clean Up:	Reducer #54, R7K54

RECOMMENDED USES

- For industrial, commercial, or marine applications where a heavy duty epoxy coating is required.
- Superior resistance to chemicals, moisture, abrasion, and impact
- Meets ADA requirements for slip resistance for floors
- Excellent resistance to alkalis, dilute acids, spillage of solvents, chemicals, jet fuel, grease, etc.
- Clear finish for interior use only
- Suitable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Substrate*: Concrete

Surface Preparation*: Clean, dry, sound

System Tested*:

1 ct. ArmorSeal 1000 HS (reduced)

1 ct. ArmorSeal 1000 HS @ 3.0-5.0 mils (75-125 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 Kg load	64.8 mg loss
Adhesion, over concrete	ASTM D4541	350 psi, 100% concrete failure
Direct Impact Resistance (steel)	ASTM D2794	58 in. lbs
Dry Heat Resistance	ASTM D2485	180°F (82°C)
Flexibility (steel)	ASTM D522, 180° bend, 1/8" mandrel	Passes
Pencil Hardness	ASTM D3363	HB
Slip Resistance, Floors	ASTM C1028-96, .60 minimum Static Coefficient of Friction	Passes wet and dry, with and without SharkGrip Additive

Epoxy coatings may darken or yellow following application and curing.



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RECOMMENDED SYSTEMS

Dry Film Thickness / ct.
Mils (Microns)

Concrete/Wood:

- 1 ct. ArmorSeal 1000 HS
(reduced as necessary up to 1 pt/gal with R7K54)*
1-2 cts. ArmorSeal 1000 HS 3.0-5.0 (75-125)
(with anti-slip aggregate if required)

Concrete:

- 1 ct. ArmorSeal 33 Epoxy Primer/Sealer 8.0 (200)
1-2 cts. ArmorSeal 1000 HS 3.0-5.0 (75-125)
(with anti-slip aggregate if required)

Steel:

- 1 ct. Recoatable Epoxy Primer 4.0-5.0 (100-125)
1-2 cts. ArmorSeal 1000 HS 3.0-5.0 (75-125)

Painted Surfaces in Sound Condition:

- 1-2 cts. ArmorSeal 1000 HS 3.0-5.0 (75-125)

*Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

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-SP6/NACE 3
Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3

Wood, interior: Clean, smooth, dust free
*Primer Required

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

White and Ultradeep may be tinted with Maxitoner Colorants at 200% tinting strength into Part A. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

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:
Part A: 1 gallon (3.78L) containers
Part B: 1 gallon (3.78L) containers
(clear available in 5 gallon /18.9L containers)
Weight: 12.51 ± 0.2 lb/gal ; 1.5 Kg/L
mixed, may vary by 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.



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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 or before flash rusting occurs.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Always follow the standard methods listed below:

ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI 03732 Concrete Surface Preparation.

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	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted D St 3	D St 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 UpReducer #54, R7K54

Airless Spray

Pressure.....2500 psi
Hose.....3/8" ID
Tip......015" - .021"
Filter.....60 mesh
Reduction.....As needed up to 10% by volume

Brush

Nylon/Polyester or Natural Bristle
Reduction.....As needed up to 10% by volume

Roller

Cover3/8" woven with solvent resistant core
Reduction.....As needed up to 10% 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.

Mix contents of each component thoroughly with low speed power agitation. Combine one Part A with one Part B by volume and mix for 3 minutes and until uniform. Allow the material to sweat-in as indicated. Re-stir before using.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 125	8.0 200
Dry mils (microns)	3.0 75	5.0 125
~Coverage sq ft/gal (m ² /L)	206 5.0	350 8.6
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1040 25.5	

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

Drying Schedule @ 6.0 mils (150 microns):

	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	4 hours	2 hours	30 minutes
To recoat:			
minimum:	24 hours	8 hours	4 hours
maximum:	7 days	7 days	7 days
Foot traffic:	48 hours	24 hours	12 hours
Heavy traffic:	4-5 days	48-72 hours	24-36 hours
To cure:	10 days	7 days	4 days
<i>If maximum recoat time is exceeded, abrade surface before topcoating.</i>			
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	2 hours	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 splatters 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.

No reduction of material is recommended as it 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 can not be sprayed if anti-slip aggregate is use.

Anti-slip additives, such as H&C SharkGrip®, may be added to the coating to provide some slip resistance. This product should not be used in place of a non-skid finish.

Anti-slip additive may be mixed into the final coat just prior to application. Exception: if anti-slip is desired with Clear finish, it should be hand broadcast.

Prime coat for concrete may be reduced up to 1 pint per gallon.

Clear is for interior use only.

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

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