THE SHERWIN-WILLIAMS COMPANY

Heavy Duty Floor Coatings

INDUSTRIAL & MARINE COATINGS

ARMORSEAL® 1000HS

PART A B67-2000 **SERIES**
PART B B67V2002 **HARDENER**

PRODUCT INFORMATION

Revised 1/02

PRODUCT DESCRIPTION

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

- Suitable for use in USDA inspected facilities
- Chemical Resistant
- Impact Resistant
- Abrasion Resistant

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 alkalies, dilute acids, spillage of solvents, chemicals, jet fuel, grease, etc.
- Clear finish for interior use only

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%, White
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:

colors	Unreduced: 330 g/L; 2.75 lb/gal
colors	Reduced 10%: 365 g/L; 3.05 lb/gal
clear	392 g/L; 3.27 lb/gal

Mix Ratio: 1:1 by volume

Recommended Spreading Rate per coat:

Wet mils:	5.0 - 8.0
Dry mils:	3.0 - 5.0
Coverage:	206 - 350 sq ft/gal approximate

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

Drying Schedule @ 6.0 mils wet @ 50% RH:

	@ 50°F	@ 77°F	@ 120°F
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 hrs	24-36 hrs
To cure:	10 days	7 days	4 days
Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	2 hours	30 minutes	10 minutes

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

Shelf Life: 36 months, unopened, at 77°F

Flash Point: 105°F, Seta, mixed

Reducer/Clean Up: Reducer #54, R7K54

PERFORMANCE CHARACTERISTICS

System Tested: (unless otherwise indicated)
Substrate: Concrete
Surface Preparation: Clean, dry, sound
1 ct. ArmorSeal 1000 HS (reduced)
1 ct. ArmorSeal 1000 HS @ 3.0 - 5.0 mils dft

Abrasion Resistance:
Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load
Result: 64.8 mg loss

Adhesion, over concrete:
Method: ASTM D4541
Result: 865 psi

Direct Impact Resistance (steel):
Method: ASTM D2794
Result: 58 in. lbs

Dry Heat Resistance:
Method: ASTM D2485
Result: 180°F

Flexibility (steel):
Method: ASTM D522, 180° bend, 1/8" mandrel
Result: Passes

Pencil Hardness:
Method: ASTM D3363
Result: HB

Slip Resistance, Floors:
Method: ASTM C1028-96, .60 minimum Static Coefficient of Friction
Result: 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

Concrete/Wood:
1 ct. ArmorSeal 1000HS (reduced 1 pt/gal with R7K54)
1-2 cts. ArmorSeal 1000HS @ 3.0 - 5.0 mils dft/ct (with anti-slip aggregate if required)

Concrete:
1 ct. ArmorSeal 33 Epoxy Primer/Sealer @ 8.0 mils dft
1-2 cts. ArmorSeal 1000HS @ 3.0 - 5.0 mils dft/ct (with anti-slip aggregate if required)

Steel:
1 ct. Recoatable Epoxy Primer @ 4.0 - 5.0 mils dft
1-2 cts. ArmorSeal 1000HS @ 3.0 - 5.0 mils dft/ct

Painted Surfaces in Sound Condition:
1-2 cts. ArmorSeal 1000HS @ 3.0 - 5.0 mils dft/ct

The systems listed above are representative of the products 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
	Concrete & Masonry:	SSPC-SP13/NACE 6
	Wood, interior:	Clean, smooth, dust free

* Primer Required

TINTING

White may be tinted using 844 Colorants at 200% tinting strength, 8 oz per gallon maximum, into Part A. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature:	50°F minimum, 120°F maximum (air, surface, and material) At least 5°F above dew point
Relative humidity:	85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A:	1 gallon containers
Part B:	1 gallon containers (clear available in 5 gallon containers)
Weight per gallon:	12.51 ± 0.2 lb mixed, may vary by color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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APPLICATION BULLETIN

Revised 1/02

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.

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. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Poured Concrete

New

For surface preparation, refer to SSPC-SP13/NACE 6. Surfaces 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, ArmorSeal 5020 Floor Resurfacer is recommended to patch and resurface damaged concrete.

Fill all cracks, voids and bugholes with ArmorSeal Crack Filler.

Always follow the ASTM 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 D4263 Plastic Sheet Method for Checking Moisture in Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete

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:	50°F minimum, 120°F maximum (air, surface, and material) At least 5°F 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 compatible with the existing environmental and application conditions.

Reducer/Clean Up ..... Reducer #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
- Cover ..... 3/8" woven with phenolic core
- Reduction ..... As needed up to 10% by volume

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 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. Re-stir before using.

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

Recommended Spreading Rate per coat:

Wet mils:	5.0 - 8.0
Dry mils:	3.0 - 5.0
Coverage:	206 - 350 sq ft/gal approximate

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

Drying Schedule @ 6.0 mils wet @ 50% RH:

	@ 50°F	**@ 77°F**	**@ 120°F**
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To cure:	10 days	7 days	4 days
Pot Life:	6 hours	4 hours	2 hours
Sweat-in-Time:	2 hours	30 minutes	10 minutes

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.

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.

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.

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.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. Follow manufacturer's safety recommendations when using any solvent.

SAFETY PRECAUTIONS

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