



# ArmorSeal Heavy Duty Floor Coatings

# ARMORSEAL®1K WATERBASED URETHANE FLOOR ENAMEL

B65W775  
B65T775  
B65A775  
B65C775

EXTRA WHITE  
CLEAR TINT BASE  
HAZE GRAY  
CLEAR

Revised 9/09

## PRODUCT INFORMATION

8.49

### PRODUCT DESCRIPTION

**ARMORSEAL 1K Waterbased Urethane Floor Enamel** is a gloss, high performance, one component polyester waterbased urethane, formulated specifically for industrial floor applications. Provides outstanding abrasion resistance, good chemical resistance, with excellent color and gloss retention.

- Fast dry
- Low VOC
- Excellent color and gloss retention
- Chemical resistant
- Impact and abrasion resistant
- Performance comparable to two component WB urethane
- Resistant to "hot tire" pick-up
- May exhibit "tire tracking"
- Outstanding application properties

### PRODUCT CHARACTERISTICS

<b>Finish:</b>	Gloss
<b>Color:</b>	Wide range of colors possible.
<b>Volume Solids:</b>	25.5% ± 2%, (Clear) 34% ± 2%, (Colors) (May vary by color)
<b>Weight Solids:</b>	28.5% ± 2%, (Clear) 44% ± 2%, (Colors) (May vary by color)
<b>VOC (EPA Method 24):</b>	<250 g/L; 2.0 lb/gal

### Recommended Spreading Rate per coat:

	Clear Coat		Colors	
	Min.	Max.	Min.	Max.
<b>Wet mils (microns)</b>	4.0	100	8.0	200
<b>Dry mils (microns)</b>	1.0	25	2.0	50
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	204	5.0	408	10.0
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil/25 micron dft</b>	544 (13.3)			
<i>Apply by brush or roller only.</i>				

### Drying Schedule @ 4.0 mils wet (100 microns):

	@ 55°F/13°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
<b>To touch:</b>	1.5 hours	45 minutes	25 minutes
<b>Foot traffic:</b>	18 hours	8 hours	6 hours
<b>Heavy traffic:</b>	24 hours	18 hours	10 hours
<b>To recoat (self):</b>			
<b>minimum:</b>	8 hours	6 hours	3 hours
<b>maximum:</b>	30 days	30 days	30 days
<b>To cure:</b>	14 days	14 days	14 days

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

<b>Shelf Life:</b>	24 months, unopened at 77°F (25°C) Store indoors at 40°F (4.5°C) to 100°F (38°C)
<b>Flash Point:</b>	>200°F (93°C), Seta Flash, mixed
<b>Reducer/Clean Up:</b>	Water

### RECOMMENDED USES

For use over prepared concrete floors or previously painted floor surfaces in sound condition.

- Manufacturing plants
- Laboratories
- Schools
- Hospitals
- Aircraft Hangers
- Interior high maintenance areas
- Exterior floors-Helipads
- Suitable for use in USDA inspected facilities
- Meets ADA requirements for slip resistance for floors

### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Concrete

**Surface Preparation\*:** Clean, dry, sound

**System Tested\*:**

1 ct. ArmorSeal Floor Plex 7100 Primer @ 2.0 mils (50 microns) dft  
1 ct. ArmorSeal 1K WB Urethane Floor Enamel @ 3.0 mils (75 microns) dft  
\*unless otherwise noted below

Test Name	Test Method	Results
<b>Abrasion Resistance</b>	ASTM D4060, CS10 wheel, 1000 cycles, 1 kg load	145 mg loss
<b>Adhesion</b>	ASTM D4541	350 psi, 100% Concrete Failure
<b>Direct Impact Resistance (topcoat only)</b>	ASTM D2794	160 in. lb.
<b>Dry Heat Resistance (topcoat only)</b>	ASTM D2485	150°F (66°C), intermittent 250°F (121°C)
<b>Flexibility</b>	ASTM D522, 180° bend, 1/4" mandrel	Passes
<b>Hot Tire Pick-up</b>	ITM @ 140°F (60°C)	Passes
<b>Pencil Hardness (topcoat only)</b>	ASTM D3363	2H
<b>Reverse Impact Resistance (topcoat only)</b>	ASTM D2794	100 in. lb.
<b>Scrub Resistance</b>	ASTM 141-6192, 10,000 cycles	TBD
<b>Slip Resistance, Floors</b>	ASTM C1028-96, 0.60 minimum Static Coefficient of Friction	Pass dry with and without SharkGrip Additive; Pass wet with SharkGrip Additive

Resists splash, spillage, and fumes of dilute acids, alkalis, solvents, and fuels



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### RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
<b>Concrete floors, unpainted:</b>			
1 ct.	ArmorSeal Floor Plex 7100 Primer	1.5-2.0**	(40-50)
1-2 cts.	ArmorSeal 1K WB Urethane Floor Enamel	2.0-4.0	(50-100)
<b>Concrete floors, unpainted: Clear Only (B65C775)</b>			
1 ct.	ArmorSeal 1K Urethane Clear, Reduced 10% by volume with water (minimum)	2.0	(50)
2 cts.	ArmorSeal 1K Urethane Clear (minimum)	2.0	(50)
Note: Three Coat System is required			
<b>Concrete floors, previously painted:</b>			
1 ct.	Spot prime bare areas with 1 ct. ArmorSeal Floor Plex 7100 Primer	1.5-2.0**	(40-50)
1-2 cts.	ArmorSeal 1K WB Urethane Floor Enamel	2.0-4.0	(50-100)
<b>Painted Surfaces in Sound Condition:</b>			
1-2 cts.	ArmorSeal 1K WB Urethane Floor Enamel	2.0-4.0	(50-100)

\*\*At relative humidities above 75%, allow 16+ hours before topcoating ArmorSeal Floor-Plex 7100 Primer.

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.

**Do not use hydrocarbon solvents for cleaning.**

Minimum recommended surface preparation:

\*Concrete Masonry: SSPC13/NACE 6 (or) ICRI, 03732, CSP 1-2

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

### TINTING

Tint bases use EnviroToner Colorants at 100% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

Do not use Blend-A-Color toner

### 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: 8.7 ± 0.2 lb/gal ; 1.04 Kg/L (Clear)  
9.7 ± 0.2 lb/gal ; 1.16 Kg/L (White, Haze Gray), 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.

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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.

**Do not use hydrocarbon solvents for cleaning.**

**Concrete and Masonry**

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-2. 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, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

**APPLICATION CONDITIONS**

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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** .....Water

**Brush**

Brush.....Nylon/Polyester  
 Reduction.....As needed up to 10% by volume

**Roller**

Cover ..... 1/4"-3/8" 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.

**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
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Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	RuSt 2	CS 2	SP 2	-
Pitted & Rusted	DS 2	DS 2	SP 2	-
Rusted	CS 3	CS 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted DS 3	DS 3	SP 3	-



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## APPLICATION BULLETIN

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### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

**Mixing Instructions:** Mix paint thoroughly with low speed power agitation prior to use. Avoid vigorous agitation. Make certain no pigment remains on bottom of can.

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

#### Recommended Spreading Rate per coat:

	Clear Coat		Colors	
	Min.	Max.	Min.	Max.
Wet mils (microns)	4.0 100	8.0 200	6.0 150	12.0 300
Dry mils (microns)	1.0 25	2.0 50	2.0 50	4.0 100
~Coverage sq ft/gal (m <sup>2</sup> /L)	204 5.0	408 10.0	136 3.3	272 6.6
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil/25 micron dft	544 (13.3)			
<i>Apply by brush or roller only.</i>				

#### Drying Schedule @ 4.0 mils wet (100 microns):

	@ 55°F/13°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	1.5 hours	45 minutes	25 minutes
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Heavy traffic:	24 hours	18 hours	10 hours
To recoat (self):			
minimum:	8 hours	6 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	14 days	14 days	14 days

*If maximum recoat time is exceeded, abrade surface before topcoating.*

*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 soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with mineral spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using mineral spirits.

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### PERFORMANCE TIPS

During the early stages of drying, the coating is sensitive to rain, dew, high humidity, and moisture condensation. Plan painting schedules to avoid these influences during the first 16-24 hours of curing.

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.

When using as a clear system (B65C775), please refer to the product data page: Recommended Systems. Three coats are required.

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

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

Always test adhesion by applying a test patch of 2-3 square feet.

Allow to dry one week before checking adhesion.

**Do not use hydrocarbon solvent for cleaning.**

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.

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

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