ArmorSeal
Heavy Duty
Floor
Coatings

8.45

ARMORSEAL®
FLOOR-THANE® CRU
POLYESTER URETHANE

PART A **B65-800** **SERIES**
PART B **B65V800** **HARDENER**

PRODUCT INFORMATION

Revised 8/05

PRODUCT DESCRIPTION

ARMORSEAL FLOOR-THANE CRU is a heavy duty, two component, exterior/interior, VOC compliant, high solids, polyester-aliphatic urethane industrial floor coating. Provides a high gloss, flexible finish with maximum gloss retention, color retention, and chalk resistance.

- Outstanding resistance a wide range of chemical, weather, and mechanical conditions.
- Abrasion and impact resistant
- Superior exterior color and gloss retention.

RECOMMENDED USES

- For industrial, commercial, or marine floor use where a heavy duty polyurethane floor coating is required
- For use over concrete, steel, and wood surfaces
- Resists splash, spillage, and fumes of dilute acids, alkalies, solvents, and fuels
- Exterior floors (helipads)
- Auto service centers, computer rooms
- Suitable for use in USDA inspected facilities.

PRODUCT CHARACTERISTICS

Finish: Gloss

Color: Haze Gray, Extra White,, Clear, Safety Yellow, and a wide range of colors available

Volume Solids: 65% ± 2%, mixed, may vary by color

Weight Solids: 76% ± 2%, mixed, may vary by color

VOC (EPA Method 24): Unreduced: <340 g/L; 2.8 lb/gal
mixed Reduced 10%: <400g/L; 3.3 lb/gal

Mix Ratio: 3:1 by volume

Recommended Spreading Rate per coat:

Wet mils:	3.0 - 4.5
Dry mils:	2.0 - 3.0
Coverage:	360 - 545 sq ft/gal approximate

Drying Schedule @ 3.0 mils wet @ 50% RH:

	@50°F	@ 77°F	@100°F
To touch:	16 hours	2 hours	30 minutes
To handle:	24 hours	10 hours	2 hours
foot traffic:	24 hours	12 hours	8 hours
heavy traffic:	5 days	72 hours	48 hours
To recoat:			
minimum:	24 hours	12 hours	2 hours
maximum:	3 days	48 hours	24 hours
To cure:	7 days	7 days	5 days

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

Pot Life: 5 hours 4 hours 45 minutes

Sweat-in-Time: None required

Shelf Life: 12 months, unopened
Store indoors at 40°F to 100°F

Flash Point: 102°F TCC, mixed

Reducer/Clean Up: Reducer #132, R7K132

PERFORMANCE CHARACTERISTICS

Abrasion Resistance:
Method: ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load
Result: 76 mg loss (average of 5 trials)

Adhesion, steel:
Method: ASTM D3359 Method B
Result: 5B, 100% Retention
Method: ASTM D4541
Result 1200 psi

Direct Impact Resistance:
Method: ASTM D2794
Result: 100 in. lb.

Dry Heat Resistance:
Method: ASTM D2485
Result: 200°F, 250°F intermittent

Exterior Durability:
Method: 2 years at 45° South
Result: Excellent, 87% gloss retention

Flexibility: (urethane only)
Method: ASTM D522, 180° bend, 1/4" mandrel
Result: Passes

Humidity Resistance:
Method: ASTM D4585, 100°F, 2000 hours
Result: No blistering, cracking, softening or delamination

Pencil Hardness:
Method: ASTM D3363
Result: 6H

Salt Fog Resistance, with primer:
Method: ASTM B117, 1000 hours
Result: Rating 10 per ASTM D610 for rusting, less than 1/16" creepage at scribe. No blistering, cracking, softening, or delamination of the film.

Slip Resistance, Floors:
Method: ASTM C1028-96, .60 minimum Static Coefficient of Friction
Result: Passes wet and dry, with and without SharkGrip Additive

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PRODUCT INFORMATION

RECOMMENDED SYSTEMS

Concrete/Wood:
1 ct. ArmorSeal 1000HS (reduced 1 pt/gal with R7K54)
2 cts. ArmorSeal Floor-Thane CRU @ 2.0 - 3.0 mils dft/ct

Steel:
1 ct. Recoatable Epoxy Primer @ 4.0-5.0 mils dft
2 cts. ArmorSeal Floor-Thane CRU @ 2.0 - 3.0 mils dft/ct

Painted Surfaces in Sound Condition:
1-2 cts. ArmorSeal Floor-Thane CRU @ 2.0 - 3.0 mils dft/ct

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:	SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3
Wood:	Clean, smooth, dust free

* Primer required

TINTING

Tint Part A with 844 Colorant at 200% tint strength (white and clear only). Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature:	40°F minimum, 100°F maximum (air, surface, and material) At least 5°F above dew point
Relative humidity:	75% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	1 gallon mix:	4 gallon mix:
Part A:	.75 gallons	3 gallons
Part B:	1 quart	1 gallon

(premeasured components)

Weight per gallon: 11.4 ± 0.2 lb mixed, 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.

DISCLAIMER

WARRANTY

ArmorSeal Heavy Duty Floor Coatings

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APPLICATION BULLETIN

Revised 8/05

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

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 (1-2 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 or ICRI 03732, CSP 1-3. 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 8.0 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, Kem Cati-Coat HS Epoxy Filler/Sealer is recommended to patch and resurface damaged concrete.

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

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-SP13/Nace 6 Surface Preparation of Concrete.
ICRI 03732 Concrete Surface Preparation

Wood

Surface must be clean, dry and sound. Prime with recommended primer and paint as soon as possible. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped or burned, sanded and spot primed before full coat of primer is applied. All nail holes or small openings must be properly caulked.

Surface must be clean, dry and sound. Remove any oils and dirt from the surface using a degreasing solvent or strong detergent. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile.

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 products 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 minimum, 100°F maximum (air, surface, and material) At least 5°F above dew point
Relative humidity:	75% 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 ..... Reducer #132, R7K132

Airless Spray

Pressure ..... 2400 - 3000 psi
Hose ..... 3/8" ID
Tip ..... .013" - .017"
Filter ..... 60 mesh
Reduction ..... As needed up to 10% by volume

Conventional Spray

Gun ..... Binks 95
Cap 63P
Tip 66
Atomization Pressure ... 50 - 60 psi
Fluid Pressure ..... 20 - 30 psi
Reduction ..... As needed up to 10% by volume

Brush

Brush ..... Natural Bristle
Reduction ..... Not recommended

Roller

Cover ..... 1/4" woven with phenolic core
Reduction ..... Not recommended

If specific application equipment is not 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 three parts 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.
If reducer is used, add only after both components have been thoroughly mixed.
If an anti-slip finish is desired, the additive is mixed into the final coat just prior to application. (EXCEPTION: If anti-slip is desired with Clear finish, it should be hand broadcast). A 3/4" pile roller is recommended for the final coat when anti-slip aggregate is used.

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

Recommended Spreading Rate per coat:

Wet mils:	3.0 - 4.5
Dry mils:	2.0 - 3.0
Coverage:	360 - 545 sq ft/gal approximate

Drying Schedule @ 3.0 mils wet @ 50% RH:

	@50°F	@ 77°F	@100°F
To touch:	16 hours	2 hours	30 minutes
To handle:	24 hours	10 hours	2 hours
foot traffic:	24 hours	12 hours	8 hours
heavy traffic:	5 days	72 hours	48 hours
To recoat:			
minimum:	24 hours	12 hours	2 hours
maximum:	3 days	48 hours	24 hours
To cure:	7 days	7 days	5 days

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

Pot Life:	5 hours	4 hours	45 minutes

Sweat-in-Time: None required

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

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.

Excessive reduction of material 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 #132, R7K132.

When applying the clear, apply at 3.0 mils wet maximum.

Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

Additive of anti-slip aggregate produces only a light nonslip texture. Product should not be used in place of a nonskid finish when safety is a concern.

Material cannot be sprayed if anti-slip aggregate is used.

Shot blasted floors will require a high build primer.

When rolling this product, always maintain a wet edge to avoid roller marks. Roll as close to any cut-in areas as possible to eliminate visual imperfections. Roller application must be from a roller tray, not by pouring the material onto the surface.

Coated surfaces may discolor under tires due to tire plasticizer migration.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #132, R7K132. Clean tools immediately after use with Reducer #132, R7K132. Follow manufacturer's safety recommendations when using any solvent.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

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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.

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.