



Protective & Marine Coatings

GENERAL POLYMERS® 4685W POLY-COTE™ URETHANE HIGH PERFORMANCE WALL COATING

PART A
PART B

GP4685W
GP4685B01

SERIES
STANDARD HARDENER

Revised December 4, 2014

PRODUCT INFORMATION

PRODUCT DESCRIPTION

GENERAL POLYMERS 4685W POLY-COTE HIGH PERFORMANCE WALL COATING is a high solids, aliphatic polyurethane, light stable and non-yellowing resin, used as a topcoat to the General Polymers wall systems it provides a slight stipple, high gloss finish ideal for clean environments and frequent wash downs.

ADVANTAGES

- UV Stable (interior or exterior)
- Acceptable for use in USDA inspected facilities
- High gloss
- Resistant to Betadine staining
- Washable with steam or hot water
- Good chemical resistance
- Available with an antimicrobial agent
- May be used in exterior environments

TYPICAL USES

GENERAL POLYMERS 4685W POLY-COTE HIGH PERFORMANCE WALL COATING can be used in facilities requiring sanitary surfaces including pharmaceutical, food and beverage and spirits, healthcare, kitchen, bath and washroom areas, clean room environments, correctional and institutional facilities. GENERAL POLYMERS 4685W POLY-COTE HIGH PERFORMANCE WALL COATING is the finish coat used on SANIFLEX®, SANIGLAZE®, SANIGLASS® and SANIFIBER wall systems.

LIMITATIONS

- Slab on grade requires vapor/moisture barrier.
- Substrate must be structurally sound, dry and free of bond inhibiting contaminants.
- During installation and initial cure cycle substrate and ambient air temperature must be at a minimum of 60°F (16°C) and a maximum of 90°F (32°C). Substrate temperature must be at least 5°F (3°C) above the dew point.
- Humidity must not exceed 80%.
- When required, adequate ventilation shall be provided and proper clothing and respirators worn.
- DO NOT PREMIX PART B HARDENER.
- Must be applied over primed and/or coated surface.
- If an additional coat is required, it is recommended the surface be sanded with a fine grit medium, (150 grit or finer), and then solvent wiped prior to recoating even if within the recoat window.
- **Strictly adhere to published coverage rates.**

SURFACE PREPARATION

Proper inspection and preparation of the substrate to receive resinous material is critical. Read and follow the "Instructions for Concrete Surface Preparation" (Form G-1) for complete details.

PRODUCT CHARACTERISTICS

| | |
|-----------------------------|----------------------------|
| Color: | White |
| Mix Ratio: | 1:1 |
| Volume Solids: | 99% ± 2%, mixed |
| Weight Solids: | 99% ± 2%, mixed |
| VOC (EPA Method 24): | <50 g/L mixed; 0.41 lb/gal |
| Viscosity, mixed: | 6,500 cps |

Recommended Spreading Rate per coat:

| | Minimum | Maximum |
|---|------------|------------|
| Wet mils (microns): | 3 (75) | 4 (100) |
| ~Coverage sq ft/gal (m²/L): | 400 (10.1) | 500 (12.7) |

Drying Schedule @ 4 mils (100 microns) wet:

| | |
|---|--------------------------------------|
| | @ 73°F (23°C) |
| To touch: | 8-12 hours |
| To recoat: | 8-24 hours |
| Full Cure: | 3 days |
| <i>If maximum recoat time is exceeded, abrade surface before recoating.</i> | |
| <i>Drying time is temperature, humidity, and film thickness dependent.</i> | |
| Pot Life: | gallon mass 30 minutes @ 73°F (23°C) |

Shelf Life: Part A: 12 months, unopened
Part B: 12 months, unopened
Store indoors at 50°F (10°C) to 90°F (32°C)

Flash Point: >212°F (>100°C), ASTM D 93, mixed

PERFORMANCE CHARACTERISTICS

| Test Name | Test Method | Results |
|---|---------------------------------------|--|
| Abrasion Resistance | ASTM D 4060, CS17 wheel, 1,000 cycles | 20-30 mg loss |
| Adhesion | ASMT D 3359 | Pass |
| Flammability | | Self-extinguishing over concrete |
| Impact Resistance | ASTM D 2794 | Direct inch-pound greater than 160, passes Reverse, inch-pound greater than 160, passes |
| Pencil Hardness | ASTM D 3363 | 2H |
| Resistance to Elevated Temperature | MIL-D-3134J | No slip or flow at required temperature of 215°F (102°C) |
| Tensile Strength | ASTM D 638 | 2,000 psi |



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APPLICATION

APPLICATION INSTRUCTIONS

DO NOT PREMIX PART B HARDENER.

1. Premix 4685WA (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to introduce air into the material.

2. Add 1 part 4685WA (resin) to 1 part 4685B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.

3. 4685W may be applied via spray, roller or brush. Apply using a 1/4" nap non-shedding, urethane enamel roller at a spread rate of 180-240 sq. ft. per gallon evenly with no runs. Note: Roller application will leave a stipple finish. A final roll with a sponge roller will reduce but not eliminate stipple.

4. Allow to cure overnight. Allow to cure 48 hours before water exposure and 7 days for full chemical resistance. In cool and/or high humidity conditions, a surface film may form which can be washed with soap and water.

NOTE: Application thicknesses over 5 mils are NOT recommended. Irregular surface defects may occur. Black or dark colored substrates may require two coats.

Mix one gallon at a time. Use clean, dry plastic paint trays between mixes. 3/16" short nap phenolic core nylon or lambs wool covers are required. A light 150 grit sanding, followed by solvent wipe is required for most painted surfaces.

ORDERING INFORMATION

Packaging:

| | |
|---------|--|
| Part A: | 1 gallon (3.8L) and 5 gallon (18.9L) containers |
| Part B: | 1 gallon (3.8L) containers 5 gallons (18.9L) containers |

Weight:

10.8 ± 0.2 lb/gal; 1.29 Kg/L
mixed, may vary by color

CHEMICAL RESISTANCE

For comprehensive chemical resistance information, consult the Chemical Resistant Guide and contact the Technical Service Department.

CLEANUP

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

SAFETY

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.

MAINTENANCE

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact the Technical Service Department.

SHIPPING

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio.

- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California.

For specific information relating to international shipments, contact your local sales representative.

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.