

Technical Data Sheet



4685

POLY-COTE™ URETHANE

PRODUCTION DESCRIPTION

General Polymers 4685 POLY-COTE is a high solids, aliphatic polyurethane enamel. It is non-yellowing, high gloss and provides excellent chemical resistance. 4685 POLY-COTE allows urethane protection of coated surfaces in occupied facilities, and is easily installed over most systems.

ADVANTAGES

- UV Stable
- High solids
- Excellent chemical resistance
- Abrasion resistant
- High gloss
- Resistant to Betadine staining
- Scuff resistant
- Available with an antimicrobial agent

TYPICAL USES

4685 POLY-COTE is ideally suited for coating industrial and decorative systems in commercial, retail and high traffic areas.

LIMITATIONS

- Slab on grade requires vapor/moisture barrier.
- Substrate must be structurally sound, dry and free of bond inhibiting contaminants.
- **Urethane floor coatings, specifically POLY-COTE, will show staining of tire marks from some brands of tires.**
- During installation and initial cure cycle substrate and ambient air temperature must be at a minimum of 60F and a maximum of 90F. Substrate temperature must be at least 5F 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.
- Under certain conditions, an exudate can form on the surface of cured 4685. If an additional coat of this product is required, the surface should 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.**

TYPICAL PHYSICAL PROPERTIES @ 73F

Mix Ratio A:B, by volume	1:1
Color	Clear, Standard Colors
VOC (Volatile Organic Content)	
EPA Method 24	Compliant
SCAQMD Method 304	Compliant
Coverage @ 3-5 mils WFT	300-400 sq. ft.
Pot Life, 1 gallon mass	30 minutes
Cure Time	
Dry to Touch	8-10 hours
Recoat	24 hours
Full Cure	3 days
Hardness	2H
ASTM D 3363	
Adhesion	Pass
ASTM D 3359	
Tensile Strength	2,000 psi
ASTM D 638	
Abrasion Resistance	20-30 mgs lost
ASTM D 4060 CS-17 Wheel, 1,000 cycles	
Resistance to Elevated Temperatures	No slip or flow at required temperature of 215F
MIL-D-3134J	
Flammability	Self-extinguishing over concrete
Gloss 60 @ 73F, 50% RH	85 millage pts
Impact Resistance	Direct, 160 inch pounds
ASTM D 2794	Reverse, 160 inch pounds

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.

STORAGE / APPLICATION

• MATERIAL DELIVERY AND STORAGE

Store materials in accordance instructions, with seals and labels intact and legible. Keep resins, hardeners, and solvents separated from each other and away from sources of ignition. One year shelf life is expected for products stored between 50°F - 90°F.

• APPLICATION INSTRUCTIONS

1. Premix 4685A (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 4685A (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. Apply 4685 using a 1/4" nap roller at a spread rate of 300-400 square feet per gallon, evenly, with no puddles making sure of uniform coverage. **Take care not to puddle materials and insure even coverage.** If a second coat is required, the surface must be abraded with 80-120 grit paper or screen and tack wiped prior to second application.

4. Allow to cure 24 hours minimum before opening to traffic. In cool and/or high humidity conditions, a surface film may form which can be washed with soap and water.

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. All applicable federal, state, local and particular plant safety guidelines must be followed during the handling and installation and cure of these materials. Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

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 document 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(s) offered at the time of publication. Published technical data and instructions are subject to change without notice.

Consult www.generalpolymers.com to obtain the most recent Product Data information and Application 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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