



Protective & Marine Coatings

GENERAL POLYMERS® 3746 HIGH PERFORMANCE EPOXY

PART A GP3746 SERIES
 PART A GP8746 WITH ANTIMICROBIAL AGENT
 PART B GP3746B01 HARDENER
 PART B GP3746B02 FAST CURE HARDENER

Revised: October 23, 2017

PRODUCT INFORMATION

PRODUCT DESCRIPTION

GENERAL POLYMERS 3746 High Performance Epoxy is a two-component, recoatable epoxy and binder resin. It may be used directly over primed substrates, or as a gloss seal coat over decorative slurry and mortar systems. GENERAL POLYMERS 3746 High Performance Epoxy is extremely hard wearing, chemical, impact and abrasion resistant.

ADVANTAGES

- Impact and abrasion resistant
- Durable, easy to clean
- Chemical resistant
- Suitable for use in USDA inspected facilities
- Acceptable for use in Canadian Food Processing facilities, categories: D2 (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative)
- Available with an antimicrobial agent (GP8746 series)
- Tint bases can be tinted using Maxitoner @ 50% tint strength See Tinting section for details

TYPICAL USES

GENERAL POLYMERS 3746 High Performance Epoxy should be used in areas where maintenance of a high performance, aesthetically appealing and chemical resistant epoxy system is required. GENERAL POLYMERS 3746 High Performance Epoxy is suited for use in clean rooms, laboratories, workshops, and light assembly areas.

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 50°F (10°C). Substrate temperature must be at least 5°F (3°C) above the dew point (for lower temperature installation contact the Technical Service Department).
- Maximum dry surface temperature not to exceed 160°F (71°C).
- Strictly adhere to published coverage rates.
- Apply clear at only 10-15 mils (250-375 microns) maximum per coat.

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

Finish: Gloss
Color: Clear, Standard Colors
 Wide range of colors possible
Volume Solids: 98% ± 2%, mixed
Weight Solids: 98% ± 2%, mixed
Mix Ratio: 2:1
VOC (EPA Method 24): <100 g/L; .83 lbs/gal (as applied)

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns):	10.0 (250)	30.0 (750)
Coverage sq ft/gal (m²/L):	52 (1.3)	157 (3.9)

PRODUCT CHARACTERISTICS (CONT'D)

Drying Schedule @ 10.0 mils (250 microns) wet:

	@ 55°F (13°C)	@ 72°F(22°C)	@ 95°F(35°C)
Standard Hardener:			
		50% RH	
To touch:	16-24 hours	6-12 hours	4-8 hours
To recoat:			
minimum	24 hours	8 hours	6 hours
maximum	48 hours	24 hours	24 hours
Foot traffic:	48 hours	24 hours	18 hours
Heavy traffic:	96 hours	72 hours	60 hours
Full cure:	7 days	7 days	7 days
Fast Cure Hardener:			
To touch:		3-4 hours	
To recoat:			
minimum		6	
maximum		12	
Foot traffic:		10-12 hours	
Heavy traffic:		24 hours	
Full cure:		7 days	
<i>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life (Standard) gallon mass	60 minutes	40 minutes	20 minutes
Pot Life (Fast Cure) gallon mass		25 minutes	
Shelf Life:	Part A: 18 months, unopened Part B (Standard): 12 months, unopened Part B (Fast Cure): 12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)		

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles	76 mg loss
Adhesion	ACI 503R	300 psi, concrete failure
Flammability		Self-extinguishing over concrete
Flexural Strength	ASTM D 790	~12,400 psi
Hardness, Shore D	ASTM D 2240	77
Impact Resistance	MIL-D-3134J	Direct: 160 in-lb Reverse: 20 in-lb
*Surface Burning	ASTME84/NFPA 255	Flame Spread Index 20; Smoke Development Index 90
Tensile Strength	ASTM D 638	3527.4 psi

*GENERAL POLYMERS 3477 at 1.5 mils (40 microns) DFT topcoated with GENERAL POLYMERS 3746 at 17.5 mils (438 microns) DFT



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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. 18 months shelf life is expected for products stored between 40°F (4.5°C) - 100°F (38°C).

- APPLICATION INSTRUCTIONS

1. Premix GP3746 (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 2 parts GP3746 (resin) to 1 part GP3746B (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 GP3746 using a squeegee or trowel and back roll with a 3/8" nap roller at a spread rate of 50-160 square feet per gallon (1.3-4.0 meters squared per liter) to yield 10-30 mils (250-750 microns) WFT making sure of uniform coverage. Take care not to puddle materials and insure even coverage.

4. Allow to cure 24 hours minimum before opening to traffic and 72 hours before water exposure.

Note: Epoxy materials will appear to be cured and "dry to touch" prior to full chemical cross linking. Allow epoxy to cure a minimum of 3 days prior to exposure to water or other chemicals for best performance.

TINTING

Tint bases can be tinted using Maxitoner @ 50% tint strength. No more than 6 oz. of Maxitoner colorant for the Ultra Deep Base and no more than 2 oz. of Maxitoner colorant for the White Base.

Ensure that the colorant is thoroughly incorporated prior to use

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.

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.