GENERAL POLYMERS® 3746 HIGH PERFORMANCE EPOXY

**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/recipes with your SW Sales Representative)
- Available with an antimicrobial agent (GP8746 series)
- Suitable for use in USDA inspected facilities
- Chemical resistant
- Durable, easy to clean
- Impact and abrasion resistant

**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 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**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>ASTM D4060, CS17 wheel, 1000 cycles</td>
<td>76 mg loss</td>
</tr>
<tr>
<td>Adhesion</td>
<td>ACI 503R</td>
<td>300 psi, concrete failure</td>
</tr>
<tr>
<td>Flammability</td>
<td>Self-extinguishing over concrete</td>
<td></td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>ASTM D 790</td>
<td>~12,400 psi</td>
</tr>
<tr>
<td>Hardness, Shore D</td>
<td>ASTM D 2240</td>
<td>77</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>MIL-D-3134J</td>
<td>Direct: 160 in-lb Reverse: 20 in-lb</td>
</tr>
<tr>
<td>*Surface Burning</td>
<td>ASTM E84/ NFPA 255</td>
<td>Flame Spread Index 20; Smoke Development Index 90</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D 638</td>
<td>3527.4 psi</td>
</tr>
</tbody>
</table>

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

**APPLICATION**

**Drying Schedule @ 10.0 mils (250 microns) wet:**

- @ 55°F (13°C) @ 72°F (22°C) @ 95°F (35°C)
  - Standard Hardener:
    - 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
  - Fast Cure Hardener:
    - To touch: 3-4 hours
    - To recoat: minimum 6 hours
    - Maximum 12 hours
    - Foot traffic: 10-12 hours
    - Heavy traffic: 24 hours
    - Full cure: 7 days

If maximum recoat time is exceeded, abrade surface before recoating.

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

- **Pot Life**
  - (Standard) gallon mass 60 minutes 40 minutes 20 minutes
  - (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)

**PRODUCT INFORMATION**
**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 Maxitoners @ 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.

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