TECHNICAL DATA SHEET

POLYTEX 13

100% EPOXY HIGH-BUILD COATINGS

Description:
Two Component, 100% solids, high-build epoxy coating.

Uses:
Used for used for coating picture plaques, wood, photographs, plaster, and craftwork. It can also be used for magazine and newspaper clippings, ceramic statues, general coatings, tabletops and bar tops.

HANDLING PROPERTIES	POLYTEX 13 RESIN 3 / HARDENER XI	Test Method
Resin Density at 25°C, lbs/gal	9.6	ASTM D1475
Hardener Density at 25°C, lbs/gal	8.1	ASTM D1475
Resin Viscosity at 25°C, cP	5,300	ASTM D2196
Hardener Viscosity at 25°C, cP	2,100	ASTM D2196
Mix Ratio by Weight	100A:85B	Calculated
Mix Ratio by Volume	1A:1B	Calculated
Initial Mixed Viscosity 25°C, cP	3,400	ASTM D2196
Gel Time at 25°C, 150g mass, min.	52	ASTM D2471
Thin Film Set Time at 25°C, 8 mil, hours	4-5	
Minimum Recommended Temp, °F	60	
Full Cure at 25°C, days	5-7	

PHYSICAL PROPERTIES	POLYTEX 13 RESIN 3 / HARDENER XI	Test Method
Color	Clear	Visual
Izod Impact, Notched, ft-lb/in	0.60	ASTM D256
Tensile Strength, psi	6,330	ASTM D638
Tensile Modulus, psi	366,000	ASTM D638
Tensile Elongation, %	5.7	ASTM D638
HDT, Room Temp Cure, °F	112	ASTM D648
HDT, Post Cure, °F	117	ASTM D648
Compressive Strength, psi	8,600	ASTM D695
Compressive Modulus, psi	275,000	ASTM D695
Flexural Strength, psi	8,400	ASTM D790
Flexural Modulus, psi	282,000	ASTM D790
Cured Density, g/cm^3 (lbs/in^3)	1.10 (0.040)	ASTM D792
Volumetric Yield, in^3/lb	25.2	ASTM D792
Volumetric Shrinkage, %	3.1	ASTM D792/1475
Hardness, Room Temp Cure, Shore D	81	ASTM D2240
Hardness, Post Cure, Shore D	78	ASTM D2240
Tg by DSC, °F	105	ASTM D3418
Tabor Abrasion	17.0	ASTM D4060

Coverage:
One Gallon kit will cover approximately 20-30 square feet per coat.
Note: Pouring a thickness of > 1/16 inch may cause excessive bubbles, yellowing, and distortions in surface. Use multiple coats to achieve desired thickness.

Colors:
Universal Paint colorants can be added if they are water-based and not oil based.

Surface Preparation:
For best results, the surface to be covered must be dry and free of dust, wax, grease, or oil. Surfaces should be sealed. For wood, apply 2-3 coats of a lacquer sanding sealer, sanding lightly between coats. For other surfaces, like paper, use our SEAL COAT. The item to be coated should be about 2 inches above the work area so that the extra mixture will drip off the item. It is a good idea to put a newspaper or a drop cloth under the item to catch the drips. Apply tape paste wax now to prepare the back surface of the project for easy drip removal.

Measuring:
Mix only the amount of epoxy that you need at one time. Unused resin and hardener should be left in original containers. Measure 1 part Resin A to 1 part Hardener B. Measure exact amounts of both resin and hardener in separate mixing cups. Do not add more hardener than resin, as this will cause the finished coating to remain sticky. Inaccurate measuring will cause epoxy surface to remain soft or sticky "spots" on the epoxy surface.

Tools:
Mixing container- Should have smooth flat bottom and be clean and dust free.
Stick- Must have flat, straight edge to ensure thorough mixing.
Brush- Sometimes a small brush is needed for coating edges of crevices.

Mixing:
After pouring, you have about 20 minutes of working time before Polytex XI begins to harden. In a clean container, mix the measured resin and hardener. Be sure to scrape the sides and bottoms of cups containing resin and hardener when pouring into container to be mixed. Stir vigorously for about 2 minutes to insure a beautifully finished product, it is extremely important that the resin and hardener are thoroughly mixed. If bubbles appear do not worry. After approximately 2 minutes of mixing, transfer the entire batch into a second cup. Using your stick to scrape the sides and the bottom, totally empty the first cup into the second cup. Mix an additional 60 seconds and pour immediately. Larger batches of 1 qt or more will require 3-4 minutes of mixing with a straight side paint paddle. Note: When mixing large amounts of epoxy the longer mixing time will cut back on your working time. Also, a large amount of mixture will cure faster in its container. If resin bottle has been heated, working time will be approx. 10-15 minutes. We do not recommend mixing more than a 1-gallon mixture at a time.

Application:
As soon as the epoxy is mixed, pour evenly over surface. A brush may be used for touching up the sides or difficult to reach places. Spread the material evenly over the surface using a rubber glove or notched trowel. Wait 15 –20 minutes then lightly pass a torch over the surface approximately 6 inches over the surface until all bubbles are gone. DO NOT OVER TORCH.

The excess mixture will drip over the sides of the item being covered. Use one of the following methods to remove these drips. Before pouring apply tape on the edges of the back of the item. After Polytex has been cured, the tape along with the drips may be pulled off. The cured dips will be pulled off with the tape as it peeled away. Drips may be sanded off after the item has cured, if tape has not been used. Drips may be scraped off about 45 minutes after pouring, by running

a tongue depressor on the underside edge of the product where dips may have formed. Clean depressor off on paper towel often.

Drying Time:
The epoxy should be dry to touch in about 8-10 hours. A second coat can be applied within 24 hours of the first coat. If waiting longer than 24 hours, make sure to lightly sand the surface and wipe it clean with acetone prior to recoating.

One coat is usually all that is needed to capture a glossy shine. Two or more coats may be applied without damaging the first coat. Polytex is recommended for interior use only.

Clean Up:
Use Acetone to clean up Polytex while it is in its liquid state. After Polytex XI has been cured, it may be removed by sanding or a paint stripper. It is advisable to clean immediately after use.

System Post Cure Options:
Select one of the following cure schedules depending on the available time, the physical properties of the mold and the desired physical properties of the final part. Post cure the part to obtain maximum physical and thermal properties of the system. The recommended post cure temperature ramp rate between stages is up 5°F per minute for heating and down 1-2°F per minute for cooling. Heating and cooling ramp rates can vary based on size and thickness of the part. For larger thicker parts use a more conservative ramp. If you need to deviate from the recommended post cure schedule, please contact our technical service department.

Cure Increments:

	24 Hours at 77°F (25°C)	**7 Days at 77°F (25°C)**	**4 Hours at 150°F (66°C)**
Room Temperature Cure	Supported	Unsupported	
Post Cure	Supported		Unsupported

Mixing and Surface Prep:
Always use the recommended mix ratio for the system. Do not deviate in an attempt to speed up or slow down gel time. Mix together thoroughly, scraping sides and bottom of mixing container, until no streaks or striations are visible, then use immediately. Use only clean dry tools for mixing and applying. Do not mix or apply below 60°F. All surfaces must be clean, dry, and free of any surface contamination. Molds and patterns should be treated with release or parting agents.

Storage and crystallization:
Store between 60-90°F in a dry place. After use, tightly reseal all containers and store products on a raised surface during cold weather and avoid storing near outside walls or doors. If available, purge with dry nitrogen to preserve color and minimize moisture contamination. Do not allow to freeze during winter storage. Do not use material with any signs of crystallization such as solid chunks, grainy texture or white color. Crystallization can be reversed by heating the material to 125-140°F, and stirring occasionally, until all crystals dissolve.

***Safety Handling*:**
Wear protective gloves, clothing, and eye/face protection. Use only outdoors or in a well-ventilated area. Avoid contact to the skin and eyes. Avoid breathing dust, fumes, gas mist, vapors and spray. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse. These products may cause skin and respiratory allergic reactions. Consult product Safety Data Sheets for complete precautions for use of this product.