



# E-BOND 1105 SYSTEM MARINE EPOXY



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## A LOW VISCOSITY, MODIFIED LIQUID EPOXY RESIN / HARDENER SYSTEM

### General

1105 is a general-purpose modified liquid epoxy resin.

Designed to be use with: E-Bond 1205 Hardener (5:1 by volume)  
E-Bond 1206 Hardener (5:1 by volume)  
and/or E-Bond 1209 Hardener (3:1 by volume)  
modified amine curing agents

### Advantages

Superior mechanical and electrical properties  
Good film properties  
Excellent wetting in abilities  
Good chemical resistance  
Good heat resistance  
Excellent adhesion  
Outstanding versatility  
Zero VOC - Fully reactive, no low boiling constituents

### Application Areas

Laminating  
Electrical  
Construction

## Typical Properties

### 1105 RESIN PROPERTIES

Viscosity @25°C (77°F) 1200 cps  
Weight per gallon 9.57

### AD-MIXED PROPERTIES

	<u>1105A / 1205B</u>	<u>1105A / 1206B</u>	<u>1105A / 1209B</u>
Mixing Ratio			
By volume	5 : 1	5 : 1	3 : 1
By weight	100 : 20	100 : 20	100 : 33
Viscosity CPS 25°C	800	800	600
Gel Time 25°C (150 gram mass)	12.5 minutes	20 minutes	40 minutes
Shore D Hardness (14 days)	82/10	82/10	82/10
Tensile Properties (ASTM D-638)			
Tensile Strength PSI	9,500 psi	7,700 psi	10,200psi
Tensile Elongation %	3 - 4 %	3 - 5 %	3 - 5 %

## **SURFACE PREPARATION**

Before proceeding with E-Bond Marine Epoxy, the user must be familiar with working time, open time, and cure times of the components. These times will be effected by temperature. Higher temperatures: less working time, faster cure time; Lower temperature: longer working times and slower cure times.

Surface preparation is always critical for epoxy applications. Bonds of epoxy resins are only as good as the surface preparation. The surface should be cleaned of any contaminants such as grease, oil, wax, release agents, etc. Some contaminants may be removed with lacquer thinner, acetone, or other appropriate solvents. Caution must be exercised when using solvents. The surface should be wiped with paper towels or clean rags before the solvent dries. The surface must be cleaned prior to sanding to avoid sanding contaminants into the surface. The substrate must be solid, not porous, etc. All dust should be removed prior to placement of the epoxy.

### **CONSIDERATIONS FOR SURFACE PREPARATION TO AVOID EPOXY INTER-COAT ADHESION PROBLEMS**

#### Amine Blush

Due to humidity and temperatures during curing of epoxies a phenomenon may occur creating an Amine Blush to appear on the cured surface of the epoxy. This may appear as a wax-like or greasy film. If the blush is slight it may be hard to detect visually or by touch. Blush will be more noticeable in cool, damp or humid conditions. Amine blush can hinder bonding of subsequent epoxy layers. The "blush" must be removed before applying additional layers of epoxy. An Amine blush is usually formed after the initial set of the epoxy. As a general rule if a second layer of epoxy cannot be applied within 12 hours after the previous application, it is recommended that the surface be properly prepared to remove any blush that may have occurred.

Light sandblasting between coat applications is the recommended procedure for surface preparation to remove blush or contaminants that may create inter-coat adhesion problems.

Amine blush may also be removed by wet sanding.

Some amine blushes may be water soluble. Test with a pressure wash at a minimum 750 psi with injection of sufficient Dawn® Dishwashing Detergent (usually 2-3%) to remove and clean the surface of contaminates. As an alternative wash down and thoroughly scrub the surface between applications with the solution of Dawn® Dishwashing Detergent. Rinse with plenty of fresh water to thoroughly remove the dissolved blush and allow to dry completely before application of the next layer of epoxy.

**Note:** Most contractors have advised wash down and scrub with Dawn® Dishwashing Detergent and water is easy and does not create a mess. Do not use solvents

It is important that the user evaluate a small test area for proper preparation and bond before proceeding with a full scale operation.

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**CAUTION - For professional use only; not for sale to or use by the general public.** E-Bond's epoxies contain alkaline amines. Strong sensitizer; MAY CAUSE SKIN SENSITIZATION or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. IN CASE OF CONTACT immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles, and barrier cream on all exposed skin.

**LIMITED WARRANTY NOTICE:** E-BOND EPOXIES, INC warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. The purchaser must examine the product when received and promptly notify E-BOND EPOXIES, INC in writing of any nonconformity before the product is used and no later than 30 days after such non-conformity is first discovered. If E-BOND, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty.

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