

## HIGH VISCOSITY LAMINATING RESIN

### Description:

High Viscosity Laminating Resin is a high quality liquid resin which can be used for gluing, bonding and coating applications. High Viscosity Laminating Resin can also be used as a saturant with epoxy compatible fibers such as Fiberglass, Carbon Fiber, Kevlar or other types of reinforcement. We recommend choosing the hardener system based on application temperature, curing thickness, desired working time and desired drying times.

This Resin can be used with our SLOW 2:1 hardener (B-210), MEDIUM 3:1 Hardener (B-209) or FAST 4:1 Hardener (B-208) depending on the cure speed and working time desired.

### Product

### Advantages:

- NON-BLUSHING
- EXCELLENT TOUGHNESS
- EXCELLENT FLEXIBILITY

### Handling

### Properties:

	<b>SLOW 2:1 HDR (A-018/B-210)</b>	<b>MEDIUM 3:1 HDR (A-018/B-209)</b>	<b>FAST 4:1 HDR (A-018/B-208)</b>
RESIN VISCOSITY, cP (ASTM D 2196)	14,000	14,000	14,000
RESIN DENSITY, WPG (ASTM D 792)	9.65	9.65	9.65
RESIN COLOR	CLEAR	CLEAR	CLEAR
HARDENER VISCOSITY, cP (ASTM D 2196)	260	1820	5,300
HARDENER DENSITY, WPG (ASTM D 792)	8.16	8.66	9.04
HARDENER COLOR	LIGHT STRAW	STRAW	LIGHT AMBER
MIX RATIO BY VOLUME	2:1	3:1	4:1
MIX RATIO BY WEIGHT	2.22:1	3.13:1	4:1
MIXED VISCOSITY, cP (ASTM D 2196)	2,500	6,300	8,600
MIXED WPG (ASTM D 792)	9.15	9.40	9.53
GEL TIME (100g), min (ASTM D 2471)	45	23	14
SET TIME (10 MILS) @ 75°F	10-12 HR.	6-7 HR.	3-4 HR.

### Physical

### Properties:

HARDNESS, Shore D (@RT) (ASTM D 2240)	87	87	88
COMPRESSIVE STRENGTH, psi (ASTM D 695)	11,400	13,700	15,400
TENSILE STRENGTH, psi (ASTM D 638)	8,300	7,800	8,400
TENSILE MODULUS, psi (ASTM D 638)	117,000	111,000	145,000
ELONGATION @ BREAK, % (ASTM D 638)	4.2	4.6	2.7
FLEXURAL STRENGTH, psi (ASTM D 790)	14,600	16,400	16,400
Tg DSC Ultimate, °F (°C) (ASTM E 1356) <sup>1</sup>	173 (78)	200 (93)	218 (103)
Tg DMA Onset Storage Modulus, °F (°C) (ASTM E 1640) <sup>1,2</sup>	158 (70)	189 (87)	199 (93)

1. Cure Cycle: 16-24 hours at room temp, 3 hours @ 275°F
2. 1 HZ, 3°C per minute

**Mixing:**

The storage temperature of High Viscosity Laminating Resin will greatly affect the ease of mixing, application and curing time. For best results, High Viscosity Laminating Resin should be stored at **(60-80 °F or 16-27 °C)** for at least 24 hours before use. Mix RESIN WITH (hardener) for 3 minutes using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 500 rpm) to avoid air entrainment. When adding part B to part A, be sure to scrape the sides of the hardener (part B) container in order to remove all of the hardener. This is essential to maintain proper mix ratio. DO NOT mix more material than can be used within the stated working time. REMEMBER - you will have less working time at higher temperatures.

**SAFETY PRECAUTIONS**

Mix and pour in a well-ventilated area. Avoid contact with skin and eyes. If contact does occur, wash skin with soap and water and seek medical help. Read and understand all CAUTIONS on container labels and safety data sheets before using this material.

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. **DO NOT WELD ON, BURN OR TORCH ON OR NEAR, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.**

**FOR INDUSTRIAL USE ONLY****WARRANTY AND DISCLAIMER**

Copps Industries, Inc. gives no warranty, express or implied, and all products are sold upon condition that purchasers will make their own tests to determine the quality and suitability of the product. Copps Industries, Inc. shall be in no way responsible for the proper use and service of the product. The information given in this publication is considered to be accurate and reliable and is provided as a service only. Physical properties shown are typical. Actual properties are dependent on curing conditions and degree of cure. Any information or suggestions given are without warranty of any kind and purchasers are solely responsible for any loss arising from the use of such information or suggestions. No information or suggestions given by us shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.