

HM208B & HM208W

PRE-MIXED & FROZEN EPOXY MARKING INK

HM208B & HM208W are epoxy marking inks supplied in pre-mixed & frozen syringes that are ready for use once thawed. The cured polymers formed by these blends have excellent mechanical and electrical properties, demonstrate superior resistance to moisture and chemicals, and are resistant to scratch and mar. They also provide outstanding adhesion to many common materials including most metals, composites, glass, solder masks, and some types of plastics.

Thinned versions with longer work-lives and thinner viscosities are available by request. Other colors including red, orange, yellow, green, and blue are also available. Finally, longer or shorter pot lives and cure times are also available.

SUGGESTED APPLICATIONS

- Epoxy Marking Ink that complies with Mil-I-43553 and C.I.D. A-A-56032
- REACH & RoHS 3 (EU 2015/863) Compliant. No REACH SVHC components

HANDLING PROPERTIES

| | <u>VALUE</u> | <u>TEST METHOD</u> |
|--|------------------------|--------------------|
| <u>HM208B (Black)</u> | | |
| Visual Appearance | Black, smooth solution | Visual |
| Density | 1.5 g/cm ³ | ASTM E-201 |
| Flash Point | >93.3°C | ASTM D-92 |
| <u>M208W (White)</u> | | |
| Visual Appearance | White, smooth solution | Visual |
| Density, | 1.7 g/cm ³ | ASTM E-201 |
| Flash Point | >93.3°C | ASTM D-92 |
| Pot Life at 25°C | 90-120 minutes | |
| Tack-free time, thin films 25°C | 60 – 90 minutes | |
| Cure Schedules: 24-48 hours at 25°C or 90 minutes at 80°C or 60 minutes at 93°C. | | |

PHYSICAL PROPERTIES (Tested at 25°C unless otherwise noted)

| | | <u>TEST METHOD</u> |
|-------------------------------------|-------------------------|--------------------|
| Hardness, Shore D | >80D | ASTM D-2240 |
| Insulation Resistance (ohms) | >1.0 x 10 ¹⁵ | ASTM D-150 |
| Volume Resistivity (ohm-cm) at 25°C | | ASTM D-150 |
| Initial | >1.0 x 10 ¹² | |
| After 48 hours at 77F & 95%RH | >1.5 x 10 ⁹ | |

NOTE: Values are based on laboratory or average production results – not for specification purposes.

NASA/ASTM E-595 OUTGASSING (24 hours at 125°C and 10⁻⁶ torr per ASTM E-595)

To achieve low outgassing results cure for 30 minutes at 150°C (300°F).

PROCESSING AND APPLICATION INSTRUCTIONS

To use, thaw syringes for 5 – 15 minutes depending on syringe size and ambient temperature. Do not use heat to speed thawing as this may cause pre-mature gelation. A defrosting/thawing plate may be used to speed thawing without the risk of shortening the pot life as may other conductive metal surfaces. Once syringes no longer are cold to the touch they should be wiped clean of any condensation that has developed on their exterior and if they are no longer cold to the touch then the syringes are ready to use.

PACKAGING AVAILABLE

This product is available in a range of syringes sizes including 1cc, 3cc, 5cc, 10cc, and 30cc in both manual (thumb plunger operated) styles (ex. HSW) and in air or piston operated styles (ex. EFD). SP&S stocks syringes from many manufacturers so if a particular syringe supplier is preferred please just let us know. Syringes are typically filled to their full nominal capacity, but we can instead fill to specified as such putting 2.5cc's into a 3cc syringe. Please contact us if a custom filler level would be helpful for one or more of your applications.

STORAGE GUIDELINES

Store these materials in a clean, cool, and dry environment in their tightly closed original containers. Store at -40C or colder to maintain viscosity stability. If stored at -40C or colder continuously the shelf-life will be a minimum of 12 months from the date of shipment.

HANDLING PRECAUTIONS & PERSONAL HYGIENE

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

FIRST AID

In case of contact: **Skin** – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather. **Eyes** – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention. **Inhalation** - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician. **Ingestion** - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER

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