



Epoxy &  
Polyurethane  
Manufacturing and  
Research

TECHNICAL BULLETIN  
EPMAR® SS1920

### Description

EPMAR® SS1920 is a white, two component, heat cure epoxy developed for electronic application. SS1920 was developed for the potting and encapsulation of electronic components and circuitry. It is a flame retarded compound containing no halogens or antimony oxide.

### Performance

|   |  |
|---|--|
| Color   | White ASTM D-2240  |
| Hardness Shore D                                  | 90 ASTM D-638  |
| Tensile Strength                                  | 1,620 psi  |
| Glass Transition (Tg), °C, DSC:                   | 114  |
| Coefficient of Thermal Expansion, in/in/°C (TMA): | 4.053 X 10 <sup>-5</sup>                                     |
| Flexural Strength                                 | 10,350 psi ASTM D-790  |
| Flame Test, 1/8", 94V-0                           | UL Approved 94V0   |
| Thermal Conductivity (ASTM D-2214)                | 9.8 x 10 <sup>-4</sup> cal x cm/(sec x cm <sup>3</sup> x °C) |
| Surface Resistivity (ohms)                        | 3.5 X 10 <sup>16</sup> ASTM D-257                            |
| Volume Resistivity (ohm-cm)                       | 5.9 x 10 <sup>14</sup> ASTM D-257                            |
| Dielectric Strength (volts/mil)                   | 560 ASTM D-149   |
| Dielectric Constant (25°C. 1 kHz)                 | 4.60 ASTM D-150  |
| Dissipation Factor (25°C. 1 kHz)                  | 0.011 ASTM D-150   |
| Mix Ratio:  |  |
| Parts by Weight                                   | 100:35   |
| Parts by Volume                                   | 100:52   |
| Working Life (hours)                              | Greater than 8   |
| *Recommended Cure Time:                           |  |
| 3 Hours   | 1½ hours @ 70°C ; 1½ hours @ 115°C                           |
| 6 Hours   | 2 hours @ 70°C ; 5 hours @ 110°C                             |

\*Values not intended for use in specification preparation.

### Physical Characteristics

|                         | Part "A" | Part "B" | Mixed |
|-------------------------|----------|----------|-------|
| Color                   | White    | Amber    | White |
| Specific Gravity        | 1.75     | 1.19     | 1.61  |
| VISCOSITY @ 25°C, cps.: | 39,000   | 60       | 1,090 |
| @ 55°C, cps.:           | 3,980    | 0        | 270   |
| @ 60°C, cps.:           | 3,790    | 0        | 240   |
| @ 70°C, cps.:           | 3,150    | 0        | 130   |
| Filler Content          | 68%      | 0        | 40%   |



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**Contact EPMAR for any additional application information.**

**Warranty**

The following warranty is made in lieu of all other warranties, either expressed or implied. This product is manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer has any knowledge or control concerning the purchaser's use of this product and no warranty is made as to the results of any use. The only obligation of either seller or manufacturer shall be to replace any quantity of this product, which is proved to be defective. Any claim of defective product must be received in writing within one (1) year from date of shipment. Neither seller nor manufacturer assumes any liability for injury, loss, or damage resulting from use of this product.

**Service is part of our formula**

**Epmar Corporation**

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