

CATIONIC EPOXY CONFORMAL COATINGS

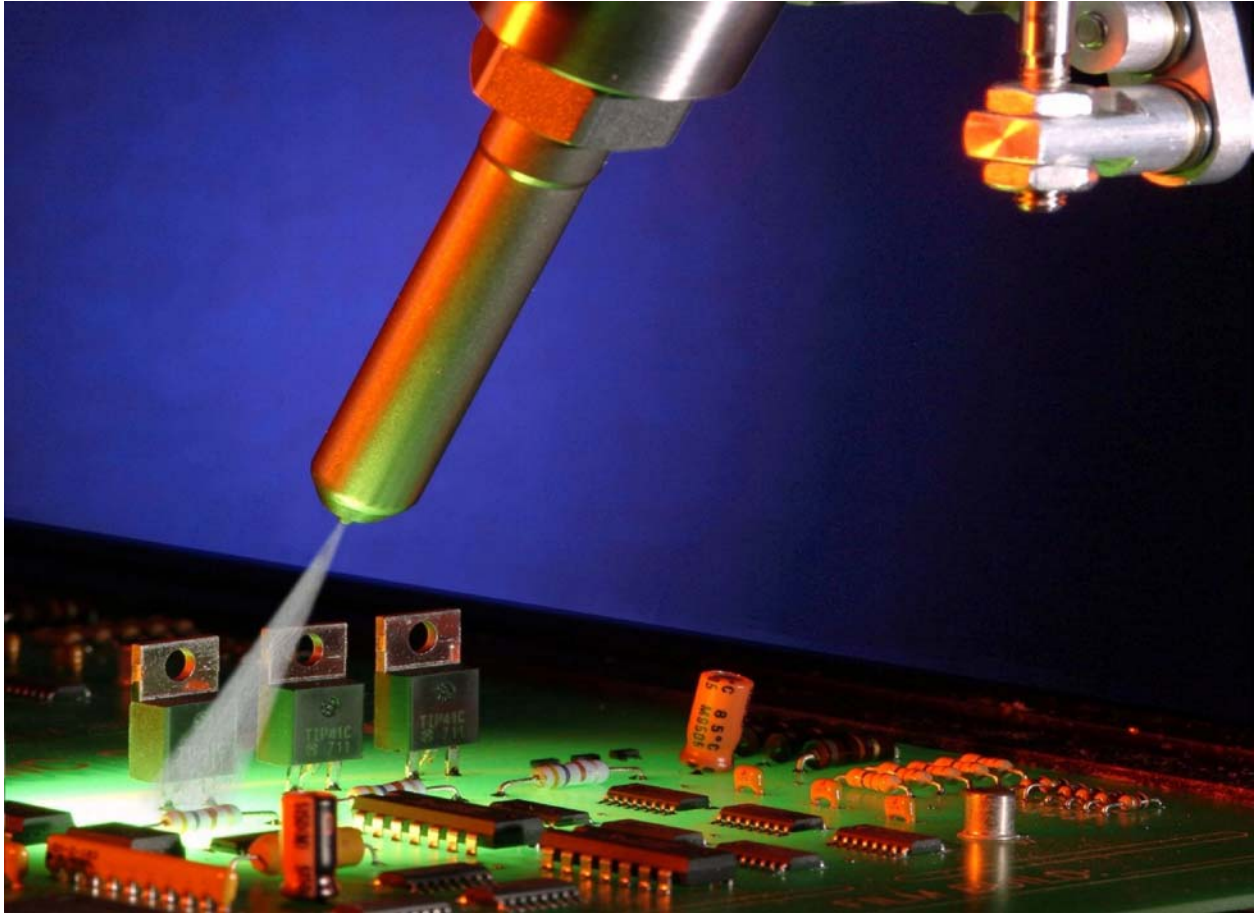


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EMCAST™ 1900 SERIES

The EMCAST™ 1900 Series of UV curable epoxies represent a new generation of conformal coatings; all are 100% solids, contain no solvents and are curable with long wave ultra violet light. The use of these systems can result in boards and components coated and cured in a matter of seconds –eliminating the need for extended room temperature, or oven cures. All EMCAST 1900 series products have little or no odor, exhibit minimal shrinkage and always cure to a tack free surface without special cure conditions or atmospheres. The EMCAST 1900 series contains products with a wide range of properties that can be customized to fit into virtually any coating application or system.

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Product Descriptions

- EMCAST 1900** The original UV cure epoxy conformal coating. A single component system, 1900 cures to a tough and resilient coating, with outstanding all around properties.
- EMCAST 1902** Higher Tg and harder than EMCAST 1900. Use in applications where higher temperature, chemical, or solvent resistance is required.
- EMCAST 1904** Lower Tg and softer than EMCAST 1900. Ideal for use over sensitive components or in applications where re-work is likely.
- EMCAST 1910** A two-component system. Once mixed, the catalyzed material will cure at temperatures as low as 30-35°C. Use in applications that have shadowed areas and where assemblies are sensitive to higher cure temperatures.
- EMCAST 1912** Single component, UV and/or thermally curable coating which is an excellent buffer coating over components where mechanical abuse maybe a factor.
- EMCAST 1915** Excellent adhesion to stainless steel, aluminum, and many plastics, cures to a hard, scratch resistant coating.
- EMCAST 1916** The newest member of the 1900 Series. 1916 features superior spray characteristics, excellent wetting, and secondary thermal cure capability for shadowed areas.

Uncured Properties:

| Product | 1900 | 1902 | 1904 | 1910 | 1912 | 1915 | 1916 |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| # of components | Single | Single | Single | Two | Single | Single | Single |
| Cure method | UV | UV | UV | UV/heat | UV/heat | UV | UV/heat |
| Viscosity – cps | 1000 | 250 | 1200 | 250 | 12,000 | 425 | 100 |
| Color | Clear | Clear | Clear | Clear | Clear | Clear | Clear |
| % Solids | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Shelf life 25 °C | 1 year | 1 year | 1 year | 1 year | 6 months | 1 year | 6 months |

Cured Properties:

| Product | 1900 | 1902 | 1904 | 1910 | 1912 | 1915 | 1916 |
|------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Hardness | 83 D | 86 D | 81D | 87 D | 65 A | 83 D | 95 A |
| Dielectric strength @ | 5200 | 4800 | 5000 | 4800 | 4500 | 4800 | 4500 |
| Volume resistivity | 8x10 ¹⁵ | 8x10 ¹⁵ | 5x10 ¹⁵ | 5x10 ¹⁵ | 8x10 ¹⁵ | 5x10 ¹⁵ | 6x10 ¹⁵ |
| Tg °C | 55 | 86 | 51 | 95 | -15 | 85 | 25 |
| Dielectric constant | 3.1 | 2.3 | 3.1 | 2.2 | 2.7 | 2.3 | 2.8 |
| Refractive Index | 1.55 | 1.49 | 1.55 | 1.48 | 1.5 | 1.5 | 1.55 |
| Secondary Cure | No | No | No | Yes | Yes | No | Yes |
| M.V.T.R. @ | 3.4 | 3.0 | 3.5 | 2.9 | 12.0 | 3.0 | 10.0 |
| % Elongation | 10 | 6 | 14 | 6 | 45 | 6 | 35 |

①°F P.C.C. ② ASTM D115 1 mil. ③ Moisture vapor transmissions rate – gram/100in²/mil/24hrs.

All data given in the bulletin is based on our own research and the research of others. They are believed to be accurate, however no guarantee of accuracy is made. Products described are sold without warranty, except conformity to specifications and on condition that the purchaser shall determine suitability for their particular purpose.

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