

## **Tra-Con Tra-Cast 3101 Encapsulating Adhesive System**

Category: Polymer, Thermoset, Epoxy

## **Material Notes:**

TRA-CAST 3101 is an easy-to-use, room temperature cure, rigid, low viscosity, 100% solids (no solvents) epoxy resin and hardener system with excellent mechanical and electrical properties. It is recommended for structural and electronic casting and encapsulating applications that require its excellent wetting and fluidity, good thermal expansion coefficients, and improved thermal shock resistance properties. TRA-CAST 3101 is readily mixed, handled and cured at room temperature, and it adheres to a wide range of materials including most metals, glass, ceramics and many plastics. Fully cured TRA-CAST 3101 is a strong, tough, durable electrical insulator which is also highly resistant to weather, water, gases and vapors, petroleum lubricants and fuels and many mild acids and alkalis. Information provided by Tra-Con Inc.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Tra-Con-Tra-Cast-3101-Encapsulating-Adhesive-System.php

| Physical Properties | Metric               | English              | Comments     |
|---------------------|----------------------|----------------------|--------------|
| Specific Gravity    | 1.50 g/cc            | 1.50 g/cc            | Mixed        |
| Viscosity           | 3000 cP              | 3000 cP              | After mixing |
| Viscosity           | @Temperature 25.0 °C | @Temperature 77.0 °F |              |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
| Hardness, Shore D     | 90     | 90      |          |

| Thermal Properties               | Metric               | English              | Comments |
|----------------------------------|----------------------|----------------------|----------|
| CTE, linear                      | 30.0 μm/m-°C         | 16.7 μin/in-°F       |          |
|                                  | @Temperature 20.0 °C | @Temperature 68.0 °F |          |
| Maximum Service Temperature, Air | 125 °C               | 257 °F               |          |
| Minimum Service Temperature, Air | -70.0 °C             | -94.0 °F             |          |

| Electrical Properties | Metric              | English             | Comments |
|-----------------------|---------------------|---------------------|----------|
| Volume Resistivity    | 1.40e+14 ohm-cm     | 1.40e+14 ohm-cm     |          |
|                       | 8.50e+10 ohm-cm     | 8.50e+10 ohm-cm     |          |
|                       | @Temperature 100 °C | @Temperature 212 °F |          |
| Dielectric Constant   | 3.9                 | 3.9                 |          |
|                       | @Frequency 1e+6 Hz  | @Frequency 1e+6 Hz  |          |
|                       | 4.2                 | 4.2                 |          |
|                       | @Frequency 1000 Hz  | @Frequency 1000 Hz  |          |



| Electrical Properties | Metric 16 7 I/V/mm | English English    | Comments |
|-----------------------|--------------------|--------------------|----------|
| Dissipation Factor    | 0.020              | 0.020              |          |
|                       | @Frequency 1000 Hz | @Frequency 1000 Hz |          |
|                       | 0.020              | 0.020              |          |
|                       | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |          |

| Processing Properties | Metric               | English              | Comments                    |
|-----------------------|----------------------|----------------------|-----------------------------|
| Cure Time             | 360 min              | 6.00 hour            | 4 hrs @ 25°C + 2 hrs @ 65°C |
|                       | 1440 min             | 24.0 hour            |                             |
|                       | @Temperature 25.0 °C | @Temperature 77.0 °F |                             |
| Pot Life              | 30 min               | 30 min               |                             |

| Descriptive Properties         | Value   | Comments       |
|--------------------------------|---------|----------------|
| Color                          | Tan     |                |
| Heat Distortion Temperature °C | 85      |                |
| Mix Ratio, parts by weight     | 100/125 | Resin/Hardener |

## **Contact Songhan Plastic Technology Co.,Ltd.**

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