

Tra-Con Tra-Bond 5126 Medium Viscosity Aerospace-Grade Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND 5126 AEROSPACE-GRADE EPOXY ADHESIVE is a two-part, clear (amber), medium viscosity, aerospace-grade epoxy adhesive system recommended for bonding a wide variety of materials for structural and non-structural applications where good wetting, toughness and superior mechanical properties are required. This high performance adhesive is mixed and used at room temperature, contains no solvents, and may be applied by brush, trowel, roller coating or silk screening. TRA-BOND 5126 is used for bonding thermally ablative insulation materials to aerodynamic surfaces and meets the Boeing Material Specification BMS 5-126 and similar specifications of other major aerospace manufacturers for high strength, high reliability bonds to many surfaces including phenolic plastics, polyester and epoxy laminates, glass and glass fabrics, hardboard, and to most metal surfaces. Fully cured TRA-BOND 5126 is a tough, durable, dimensionally stable electrical insulator with good low temperature, mechanical, thermal shock, and impact resistance properties coupled with excellent resistance to gases and vapors, petroleum products, solvents and lubricants, water, weather, salt water and salt solutions, mild acids and alkalis, and many other organic and inorganic compounds. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-5126-Medium-Viscosity-Aerospace-Grade-Epoxy-Adhesive.php

| Physical Properties | Metric | English | Comments |
|---------------------|---------------------------------|---------------------------------|-------------------------|
| Specific Gravity | 1.12 g/cc | 1.12 g/cc | Mixed |
| Solids Content | 100 % | 100 % | Reactive Solids Content |
| Viscosity | 3050 cP @Temperature 25.0 °C | 3050 cP @Temperature 77.0 °F | After mixing |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|------------|---------------|---|
| Hardness, Shore D | 75 | 75 | |
| Tensile Strength, Yield | 35.9 MPa | 5200 psi | |
| Elongation at Yield | 8.0 % | 8.0 % | |
| Adhesive Bond Strength | 9.65 MPa | 1400 psi | Lap shear, alum to alum, 7 days in water |
| | 12.4 MPa | 1800 psi | Lap shear, alum to alum, 7 days in JP4 fuel |
| | 19.3 MPa | 2800 psi | Lap shear, alum to alum |
| Izod Impact, Notched | 0.534 J/cm | 1.00 ft-lb/in | |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|--------|---------|----------|
| Maximum Service Temperature, Air | 115 °C | 239 °F | |

| Minimum Service Temperature, Air Thermal Properties | -60.0 °C Metric | -76.0 °F English | Comments |
|---|--------------------|---------------------|-------------|
| Glass Transition Temp, Tg | 63.0 °C | 145 °F | Ultimate Tg |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-----------------------------|-----------------------------|----------|
| Volume Resistivity | 6.50e+13 ohm-cm | 6.50e+13 ohm-cm | |
| Dielectric Constant | 3.35 @Frequency 1000 Hz | 3.35 @Frequency 1000 Hz | |
| Dielectric Strength | 16.7 kV/mm | 425 kV/in | |
| Dissipation Factor | 0.010 @Frequency 1000 Hz | 0.010 @Frequency 1000 Hz | |

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------------------------|-----------------------------------|----------|
| Cure Time | 240 min @Temperature 65.0 °C | 4.00 hour @Temperature 149 °F | |
| | 1440 min @Temperature 25.0 °C | 24.0 hour @Temperature 77.0 °F | |
| Pot Life | 40 min | 40 min | |

| Descriptive Properties | Value | Comments |
|----------------------------|---------|----------------|
| Color | Amber | |
| Mix Ratio, parts by weight | 100/100 | Resin/Hardener |

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