

Tra-Con Tra-Cast 3011 Semi-Flexible Clear Epoxy Casting Compound

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-CAST 3011 is a clear, low viscosity epoxy casting compound recommended for industrial embedding and casting applications where its combination of superior properties, good clarity, long pot life, near-zero shrinkage, low residual stress, improved flexibility, and excellent impact strength are required. It readily bonds to ceramics, glass, most metals, and many plastics, and it is therefore especially useful for aerospace and electronic applications where its flexibility, consistency and self- sealing properties are needed (i.e. repottable electronic assemblies). Fully cured TRA-CAST 3011 is a clear electrical insulator which is mechanically strong and tougher than comparable silicone gels, and it is further resistant to water, weather, gases and vapors, petroleum products (fuels, solvents and lubricants), mild acids and alkalis, salt solutions and many other organic and inorganic compounds. A vacuum de-airing step for 15 minutes may be required for the best clarity and optical properties. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Cast-3011-Semi-Flexible-Clear-Epoxy-Casting-Compound.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	1.15 g/cc	Mixed
Solids Content	100 %	100 %	Reactive Solids Content
Viscosity	870 cP @Temperature 25.0 °C	870 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	85	85	
Hardness, Shore D	30	30	
Elongation at Yield	66 %	66 %	

Thermal Properties	Metric	English	Comments
CTE, linear	61.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 °C	33.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 °F	
Maximum Service Temperature, Air	115 °C	239 °F	
Minimum Service Temperature, Air	-70.0 °C	-94.0 °F	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	clear; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	
Dielectric Constant	3.9	3.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	15.4 kV/mm	390 kV/in	
Dissipation Factor	0.020	0.020	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	420 min	7.00 hour	2 hrs @ 25°C + 5 hrs @ 55°C
	5760 min	96.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	180 min	180 min	

Descriptive Properties	Value	Comments
Color	Clear	
Mix Ratio, parts by weight	100/40	Resin/Hardener
Thixotropic Index	1	

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