TECHNICAL DATA SHEET EPA0145

25/02/2020

DESCRIPTION:

Tacusil™ EPA0145 is a two-part general purpose potting epoxy. It has good adhesion to versatile substrates and good resistance to chemical solvents and mechanical impact. It also has long time weather resistance and can supply excellent protection to PCBA and electronical components. This adhesive has a white version.

TYPICAL PROPERTIES:

All properties given are at 25 °C unless otherwise noted.

Property:	*Value:*	*Test Method or Source:*
Color	Black	Visual
Mix Ratio **By weight**	Part A to Part B 5 to 1	
Cure Schedule	24 hours @RT	
Viscosity: **Part A** **Part B** **Mixed**	 22,000 cps 1,050 cps 11,000 cps	Rheometer parallel plate 25mm@1/s 45530006291
Specific Gravity **Part A** **Part B** **Mixed**	 1.50 1.10 1.44	Calculated
Pot Life **(defined as the time it takes for initial mixed viscosity to double)**	25-30 mins	Rheometer parallel plate 25mm@1/s 45530006291
Gel Time	90 mins/ 100 cc sample	455300005339/Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	45 °C	453560822409 by DSC
Hardness	80 Shore D	455300006287/ASTM D2240
Water Absorption	0.5% after 24 hours	457561824543/ASTM D570
Tensile Properties **Strength** **Elongation** **Modulus**	 2,800 psi 1% 75,000 psi	 455300006285/ASTM D638/ MTS 4535601224470/ASTM D638/Instron
Compressive Properties **Strength** **Modulus**	 25,500 psi 19,600 psi	 455300006265/ASTM D695/MTS 4535601224467/ASTM D695/ Instron
Surface Resistivity	2.51 x 10^{15} ohm/sq	455300006612/ASTM D257
Volume Resistivity	6.18 x 10^{15} ohm-cm	
Dielectric Constant/ Dissipation Factor @ 100 Hz	3.2	455300006513/ASTM D150
Dielectric Strength	450 V/mil	ASTM D149 Method A, immersed in

		ASTM D3487 Type II Oil, Specimen thickness was ~1-2 mm
Coefficient of Thermal Expansion by TMA	45ppm/ °C below Tg 100 ppm/ °C above Tg	455300005340/ASTM E831 TMA, 5 °C/min
Bulk Resistivity	15 ohm-cm	455300004460/Jandel 4 point probe
Non-volatile content	100%	455300005646

This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

INSTRUCTIONS:

1. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
2. Bulk format: stir until homogeneous weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. A power mixer is suggested such as a 500-1000 rpm device with a mix paddle sufficient to turn material and disperse any filler. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.
3. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
4. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

SHELF LIFE AND STORAGE: 12 months at 25 °C
Specialty packaging may be less.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50°C) aggravate this phenomenon. Heating the individual component to 50 to 60°C while stirring can usually restore products to original state. Storage at 25 +/- 10°C is optimum for most products.