KLEBER KB-XERM UE0805 Thermally Conductive Urethane Encapsulant

Product Introduction

KLEBER KB-XERM UE0805 is a two-component urethane encapsulant designed for electronic applications. It can cures at room temperature to provide a thermally conductive and flame retardant material.

Features and Benefits

- Room or elevated temperature cure
- Thermally conductivity
- Easy to mix and apply
- Environmentally resistant
- Non-flammable

Typical Properties

Properties	Unit	Part A	Part B	Mixed
Appearance	-	Black liquid	Brown liquid	Black liquid
Viscosity @ 25°C	cps	10000-12000	4000-5000	6000-8000
Specific Gravity	g/cm^3	1.54	1.40	1.50
Mix Ratio by weight	-	100	23	-
Mix Ratio by volume	-	100	25	-
Working life @ 25°C	min	-	-	3-5
Gel time@25℃	min	-	-	15
Curing time @ 25°C	h	-	-	24
Curing time @80°C	min	-	-	30

Typical Cured Properties

Properties	Unit	Test Method	Value
Thermal Conductivity	W/m·K	ASTM D5470	0.8
Hardness	Shore A	ASTM D2240	85
Tensile Strength	MPa	ASTM D638	5
Elongation at break	%	ASTM D638	40
Volume Resistivity @ 25°C	Ohm-cm	ASTM D 257	$1x10^{14}$
Dielectric Strength	kV/mm	ASTM D149	20

Application

- On board charger
- Battery assembly
- Power modules

Operation Process

- Mixing: mix the two parts at a ratio of 4:1 by volume or 100:23 by weight. Handheld cartridges or automatic dispense are recommended for accurately mixing.
- Applying: clean the substrates with dry rag or solvents, and apply the mixed adhesive, join the parts and add enough pressure until the handling strength is reached.
- Curing: the mixed adhesive will reach full cure in 7 days at room temperature. Cure can be accelerated with elevated temperature like 80°C，30min.

Shelf Life/Storage

- Shelf life of each component is 6 months from date of manufacture when stored at 10-25 °C in original unopened container. After opening, protect each component from excessive moisture by using dry nitrogen as an inert cover.

Cautions：
The information provided in the Technical Data Sheet (TDS) (including product use and application recommendations) is based on our knowledge and experience of Kleber products. The data contained in this TDS is for reference only and is considered reliable. We cannot be held responsible for the results of others as a result of methods beyond our control. This product can have a variety of different applications and different working conditions in your environment, which is beyond our control. Therefore, Kleber assumes no responsibility for whether the product is suitable for your production process and conditions as well as the expected applications and results. We strongly recommend that you test the product before use to confirm the applicability of the product.

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