

Technical Data Sheet

FeedBond® EP-1600-SW1

Insulated Thermally Conductive Adhesive

Description:

FeedBond®EP-1600-SW1 is a epoxy/silicone hybrid type thermal conductive adhesive, apply for thermal management of electronic devices . It serves as an effective thermal interface material for heat sink devices where efficient cooling as well as long-term stability is required..

Application Package:

Devices which need high thermal conductivity(Power Devices,RF ICs and LEDs)

Characteristics:

- No yellowing due to heat and light
- High thermal conductivity
- Low drying during process
- Low bleed.

UNCURED PROPERTIES		TEST DESCRIPTION	TEST METHOD
Appearance	White		
Viscosity @ 25°C	15000 cps	Brookfield DV-III/CP-51 @ 5rpm	FT-P006
Thixotropic Index @ 25°C	1.9	Brookfield DV-III/CP-51 Visc. @ 0.5rpm/Visc. @ 5rpm	FT-P008
Grind	<25µm	Grind meter	FT-P026
Moisture Content	< 0.7 %	25°C/24hours	FT-P002
Work Life @ 25°C	48hrs	25% increase in visc. @ 5rpm	FT-P024
Shelf Life@ -40°C	6months	25% increase in visc. @ 5rpm	FT-P018
CURE CONDITION		TEST DESCRIPTION	TEST METHOD
Standard Cure Condition		120 minutes in oven @150°C	

FeedBond® EP-1600-SW1

PHYSIOCHEMICAL PROPERTIES	TEST DESCRIPTION	TEST METHOD
Hardness Shore D 90±10	Durometer Shore D	FT-P037
Glass Transition Temperature (Tg) 176°C	DMA 3 Point Bending Mode	FT-M014
Coefficient of Thermal Expansion		
Below Tg(α1) 32 ppm/°C	TMA Expansion Mode	FT-M016
Above Tg(α2) 68ppm/°C		
Dynamic Tensile Modulus		
@25°C 6620MPa	Dynamic Mechanical Thermal Analysis using <1.6 mm thick specimen	FT-M019A
@150°C 2934MPa		
@250°C 717MPa		
Thermal conductivity 1.0 W/mK	Hot Disk	FT-P022
Dielectric constant@25°C,1MHz 3.186	Analysis using >2.0 mm thick	ASTM D150
Dissipation Factor@25°C,1MHz 0.02		
MECHANICAL PROPERTIES-POST CURE	TEST DESCRIPTION	TEST METHOD
Die Shear Strength @ 25°C >120 g/die	11mil × 11mil die on Ag Leadframe	FT-M012
Lap Shear Strength, (AL-AL, Kg/cm²) >40 (570 psi)	1.The bonding area of Al-Al is about 2.54 cm². 2.the weight of adhesive is about 0.03 g. 3. the area of aluminum plate: (1.00 * 2.54 cm²)	FT-P055

Instruction

Thawing

Place the container to stand vertically for 60mins.**DO NOT** open the container before adhesive reaches ambient temperature to prevent the moisture condensation. Any moisture that collects on the thawed container should be removed prior to use. Adhesives that appear to have separated should not be used.

Storage

Adhesive should be stored @ -40°C. The shelf life of the material is only valid when the material has been stored at the correct storage condition.

Storage Temp.	-42°C~-35°C	-22°C~-18°C	0°C~5°C	18°C~28°C
Shelf Life	6 months	6 months	3 months	2 days

Availability

FeedBond® adhesives are packaged in syringes or pots per customer specification. For the details, please contact our Customer Service or sales department.

Note

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentation. It is not intended, however, to substitute for any testing you may need to conduct and to determine the suitability of our products by yourself for your particular purposes. This information may be subject to revision as new knowledge and experience become available. Since we cannot anticipate all variations in actual end-use conditions, Feedpool makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.