OUTLAST® LATENT HEAT SYSTEMS™ (LHS) EPOXY COMPOSITE

INFORMATION SHEET | September 2017 | Rev: 1

Outlast® Latent Heat Systems® (LHS®) thermal management materials provide energy absorption, heat storage and heat dissipation characteristics for passive thermal control. These materials are designed for thermal protection of electronic devices, along with temperature stabilization of thermo-sensitive processors and surfaces.

TYPICAL PROPERTIES: LHS EPOXY COMPOSITE: 27-39-4

LHS Epoxy composite is a moderately thixotropic potting and casting resin designed for applications requiring good thermal absorption, low shrinkage and a low CTE. The epoxy composite meets UL94- v0 rating and RoHs compliance.

Cure is normally achieved at room teperature, although an elevated cure schedule can be used to reach full cure quickly.

Part A to B Ratio by weight: ..... 21:1 - See specific mixing instructions on page2
Part A to B Ratio by volume: 16.7:1
Formula Specific Gravity: ..... 1.29 g/mL

Viscosity Part A: ..... Solid @25˚C to 65˚C, 500-700 cps @ 70˚C
Viscosity Part B: ..... 100-200 cps @ 25˚C
Viscosity Part A+B: ..... 500-700 cps @ 70˚C

Full Cure: ..... 1 Hour @ 70˚C, or 24 hours at room temperature
Gel Cure: ..... 30 Minutes @ 70˚C
Pot Life: ..... 15-20 Minutes @ 70˚C

Hardness, Shore D: ..... 40-45˚C @ 25˚C
Phase Transition Temp: ..... 50-55˚C
Heat of Fusion (enthalpy): ..... 80-85 J/g

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Flame Resistance: UL94-V0
Thermal Conductivity: ..... 0.95 W/m-K
RoHs Compliance: ..... Compliant

Sample Mixing Instructions: Heat Part A to 65-70˚C and thoroughly mix until smooth. Add Part B crosslinker into Part A and mix thoroughly while preventing air bubble incorporation. Directly pour into mold or cavity, and cure. Mixing, mixing ratios and mixing process can be tailored to specific customer applications equipment and process.

PRODUCT DETAILS

SUPPLIER: Outlast Technologies LLC

PRODUCT: LHS thermal management composite

END-USE: Thermal management in electronic packaging and processor/heat sink interface

STORAGE: Store in cool, dry place. Best if used within 6 months

HANDLING PRECAUTIONS: Even though this product is considered safe and nontoxic, product safety information for safe use is not included, please refer to SDS or inquire with qualified technical person at Outlast Technologies LLC

LIMITATIONS: This product is not intended for pharmaceutical or in-vitro medical use

PROTECTED BY Outlast® LHS™ TECHNOLOGY

Note: Outlast® thermal management materials are developmental products that are furnished for R&D purposes only. The information contained herein is merely preliminary data due to continued development. Further information, including data changes, may occur as testing, process optimization, and formulation changes occur and development proceeds. The user/purchaser agrees that: use is undertaken at the users sole risk, that the material is furnished "asis, with all faults", without any warranty or guarantee: and that Outlast Technologies LLC, Outlast Europe, or Outlast Asia shall not be liable for any damages, of whatever nature, arising out of the user's / purchaser's receipt and/or use of this material. Commercialization and continued supply are not assured.

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