



AC A1433-D

Dual-Curable Epoxy Sealant

Features

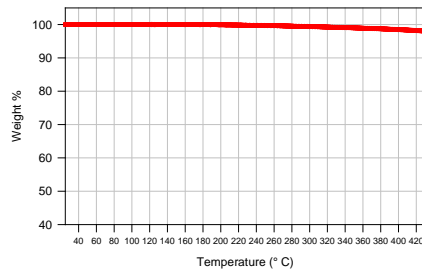
- High Tg
- High temperature resistance
- Good adhesion to various substrates: glass, metal and ceramic
- Low CTE

Description

- Dual curable epoxy sealant

Thermogravimetric analysis

- Thermal stability of cured adhesive was studied by thermogravimetric analysis in nitrogen at a scan rate of 20 °C/min



APPLICATIONS

Dual curable epoxy sealant for semiconductor packaging applications.

TYPICAL PROPERTIES

Liquid

Viscosity (cps, 25 °C)	24,000 to 30,000
Storage (°C)	15 to 25
Shelf life (15 - 25 °C)	6 months
Pot life (15 - 25 °C)	3months

Cured film

Shrinkage (linear, %)	< 0.3
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Glass transition temperature (°C, DMA)	150
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Water permeability (50 °C/95% RH, g/m ² 24 hrs, ASTM E96-80)	3.0
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Hardness – Shore D	95
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Coefficient of thermal expansion (TMA), 75 µm film below Tg (x10 ⁻⁶), °C ⁻¹	22
above Tg (x10 ⁻⁶), °C ⁻¹	60

Physical properties tested at 25°C, 50% RH (ASTM D638)

Elongation (%)	5
Modulus, psi (Kgf/mm ²)	350,000 (245)

Heat curing conditions:

@ 150 °C

16 - 24 hrs (if thermal is the only curing method)
5 – 8 hrs (if both UV and thermal curing are used)

@ 180 °C

2-5 hr (if thermal is the only curing method)
1-3 hrs (if both UV and thermal curing are used)

UV curing conditions

Flood cure system – UV dose (J/cm²), air 2.0 to 4.0

Operating temperature (°C) -40 to 160

****** For achieving optimal sealant properties the sealant needs to be cured by thermal OR thermal post cure after UV-curing is required**

****** The cure film has a yellow to amber color**

Maximum relative humidity for curing: 40%

SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution.

Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read [Material Safety Data Sheet](#) before handling.

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