

AC M729-L

Low Temperature Dual cure adhesive for Optical Components

Features

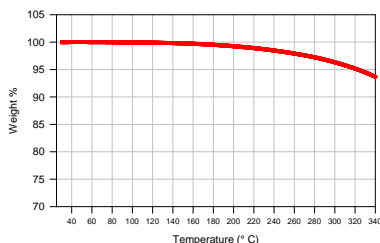
- One-component resin
- High temperature resistance
- Optically clear
- Suitable to be cured in air

Description

- Dual cure adhesive

Thermogravimetric analysis

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



APPLICATIONS

Optical components bonding.

TYPICAL PROPERTIES

Liquid

Viscosity (cps, 25 °C)	6,000 – 8,000
Storage temp (°C, storage with desiccant packages)	2 - 10
Shelf life (at 2 - 10 °C)	2 months
Pot life (at 20-25 °C)	2 weeks

When removing from refrigeration, allow the syringe to stand at room temperature for at least 30 minutes before use

Cured film

Water absorption (% , 100 °C until saturation)	0.04
Shrinkage (linear, %)	0.4
Hardness – Shore D	80-87
Glass transition temperature (°C)	96
Coefficient of thermal expansion (TMA), 75 µm film	
below Tg (x10 ⁻⁶), °C ⁻¹	40
above Tg (x10 ⁻⁶), °C ⁻¹	161

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

Tensile strength, psi (Kgf/mm ²)	5,000 (4)
Elongation (%)	40
Modulus, psi (Kgf/mm ²)	157,000 (110)

Operating temperature (°C) -50 to 150

UV curing conditions

Spot cure system – UV dose (J/cm²)

250 – 450 nm filter, 2 - 3 (1 – 2)

Suggested curing set-up:

Intensity: 500 mW/cm², Cure time: 4 sec, Cure distance: 1 cm

Flood cure system – UV dose (J/cm²), air 0.6 – 1

Thermal curing conditions for an adhesive thickness of > 3 µm)

75 °C	120 - 180 minutes
80 °C	60 - 120 minutes
85 °C	60 – 90 minutes

this grade is suitable for curing in air. User needs to determine the optimum cure time based on application for achieving full cure adhesive.

Thermal curing conditions an adhesive thickness of < 3 µm)

80 °C	120 –180 minutes
85 °C	90 – 120 minutes

this grade is suitable for curing in air. User needs to determine the optimum cure time based on application for achieving full cure adhesive.

SAFETY AND HANDLING

The uncured 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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