



AC M60-6

Dual Curable High Heat Resistance Adhesive

PRODUCT DESCRIPTION:

- One component adhesive ready for use, UV + heat curing.

PRODUCT USE:

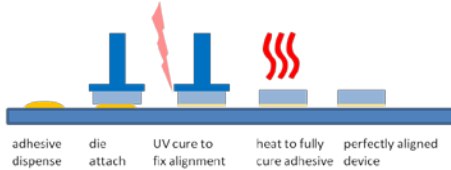
- Bonding for high adhesion
- Bonding of opaque substrates

FEATURES:

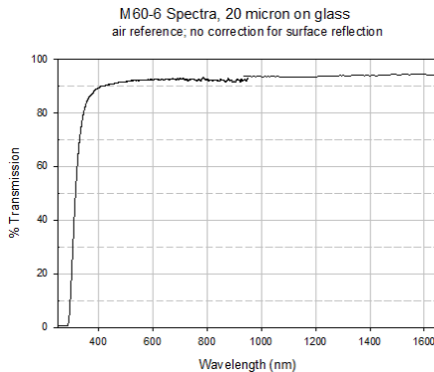
- High adhesion, high Tg, long shelf and working life, low outgas, excellent reliability performances.

INSTRUCTIONS FOR USE:

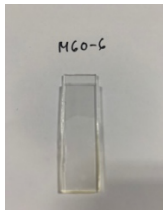
- 1) Clean the substrates to remove contamination.
- 2) Dispense adhesive on substrates
- 3) Bond substrates
- 4) UV cure to fix alignment
- 5) **Thermal cure: heat is mandatory for completely cured adhesive**



UV-Vis and NIR spectra



M60-6 is optical clear when treat with high heat in the absent of air or sandwiched between 2 substrates



CURING CONDITIONS: 2 curing ways: UV + heat or heat

- 1) **UV + Heat curing:** fix aligned parts with UV, then use heat to completely cure adhesive including adhesive in shaded areas.

First step: UV cure

*Metal halide/Mercury UV: UV-A (320-400 nm), intensity: 100-1,000 mW/cm²

*LED-365 nm, UV light intensity: 100 to 1,000 mW/ cm²

LED-365 nm		Metal Halide/Mercury(UV-A: 320-400 nm)	
UV intensity(mW/cm ²)	time (sec)	UV intensity(mW/cm ²)	time (sec)
100	100 sec or more	100	50 sec or more
or 200	50 sec or more	or 200	25 sec or more
or 300	35 sec or more	or 300	17 sec or more
or 400	25 sec or more	or 400	13 sec or more
or 500	10 sec or more	or 500	10 sec or more
or 1,000	5 sec or more	or 1,000	5 sec or more

Second step: heat cure: the adhesive is exposed to UV light or must see some UV light first, then heat cure at 150 °C to 180 °C for 60 to 120 minutes

- 2) **Heat curing:** the adhesive will cure by only heat (adhesive does not see UV light) 150°C for 16 to 24 hrs or 180°C for 3 to 6 hrs
- The actual heat cure time is dependent on the heating time of the bonded components. The heat time of the components must be added to the total cure time of the adhesive for the process

Thermal cure: heat is mandatory for completely cured adhesive

For achieve optimal adhesive properties the adhesive needs to be cured by heat OR thermal post cure after UV curing is required.

TYPICAL PROPERTIES

Uncured resin

Viscosity at 25 °C, mPa.s or cps	12,000 to 17,000
Shelf life (RT: 15 to 25°C):	3 months
Pot life or working life (20 - 25°C):	1 month
Density (g/mL)	1.15

Cured film

Shrinkage (volume, %)	1
Hardness – Shore D	80
Glass transition temperature (DMA, °C)	110
Specific heat (J/Kg °C)	1,110
Thermal Conductivity (W/m K)	0.2
Coefficient of thermal expansion (DMA)	
below Tg (x10 ⁻⁶), °C ⁻¹	28
above Tg (x10 ⁻⁶), °C ⁻¹	129
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Elongation (%)	20
Young's Modulus, MPa	1,800
Operating temperature, °C	-60 to 200

GENERAL USAGE INFORMATION:

Shipment: standar shipping no restriction

Storage: at room temperature (15 to 25 °C) in the original container is required

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. 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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