AC R262-MOD-5

UV-Curable, Low Refractive Index Optical Resin

PRODUCT DESCRIPTION:

- Base chemistry: Fluorinated acrylate, radical polymerization
- One component resin ready for use, solvent-free, UV curing

PRODUCT USE:

- Optical adhesive for fiber coupling bonding

FEATURES:

- High Tg, low refractive index, good flow properties, low viscosity

GENERAL USAGE INFORMATION:

Shipment: no restriction on shipment

Storage: After receipt in black syringes or amber HDPE bottles, room temperature storage (15-30°C) in the original container is required.

SAFETY AND HANDLING

The uncured adhesive can be cleaned with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), acetone, or xylene. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read Safety Data Sheet before handling.

UV CURING CONDITIONS:

*Metal halide/Mercury UV: UV-A (320-400 nm),intensity: 50-1,000 mW/cm^2
*or LED-365 nm, UV light intensity: 100 to 1,000 mW/ cm^2

LED-365 nm		Metal Halide/Mercury(UV-A: 320-400 nm)	
UV intensity(mW/cm^2)	x time (sec)	UV intensity(mW/cm^2)	x time (sec)
100	15 sec or more	50	40 sec or more
or 200	7 sec or more	or 100	10 sec or more
or 300	5 sec or more	or 200	7 sec or more
or 400	4 sec or more	or 500	2 sec or more
or 500	3 sec or more	or 1,000	1 sec or more
or 1,000	2 sec or more		

For obtaining the best cured adhesive, the adhesive is recommended to be cured between two substrates or in the absence of air (cure in nitrogen or an inert atmosphere).

TYPICAL PROPERTIES

Uncured resin	
Viscosity at 25 °C, mPa.s or cps	220 to 280
Density (g/mL)	1.2
Shelf life (20 - 30°C):	6 months
Pot life or working life (20 - 30°C):	3 months
Cured film	
Appearance of cured adhesive	optically clear
Shrinkage (linear, %)	< 0.5
Hardness – Shore D	80
Glass transition temperature (DMA, °C)	117
Refractive index of cured film (25 °C)	
@ 589 nm (D)	1.455
@ 1320 nm	1.444
@ 1550 nm	1.442
Depth of cure	>200 µm
Coefficient of thermal expansion (DMA)	
below Tg (x10^{-6}), °C^{-1}	18
above Tg (x10^{-6}), °C^{-1}	125
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Elongation (%)	5
Young's Modulus, MPa	689
Operating temperature, °C	-40 to 140

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