

AC L2061-B

UV-Curable, High Temperature Resistant, HIGH Refractive Index Optical Material

Features

- HIGH Refractive index
- High Tg
- High temperature resistance
- Minimal color change at high temperature
- High Hardness
- High depth of cure

Description

- UV-Curable, optical material

APPLICATIONS

To make Optical lenses, Wafer-Level Optic lenses, hybrid lenses, etc.

TYPICAL PROPERTIES

Liquid

Viscosity (cps, 25 °C)	1,800 to 2,200
Storage (°C)	15 to 25 °C
Shelf life (15 - 25 °C)	6 months
Pot life (15 - 25 °C)	3 months

Cured film

Shrinkage (linear, %)	< 1
Glass transition temperature (°C, DMA)	130
Hardness – Shore D	95
Depth of cure (mm)	>5
Coefficient of thermal expansion (TMA), 75 µm film	
below Tg (x10 ⁻⁶), °C ⁻¹	35
above Tg (x10 ⁻⁶), °C ⁻¹	175
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Elongation (%)	18
Modulus, psi	200,000
Refractive index of cured film (25°C)	
@ 589 nm (D)	1.602
@ 486 nm (F)	1.618
@ 656 nm (C)	1.597
Abbe Number (V _d)	27
Operating temperature (°C)	-40 to 140
UV curing conditions	
<u>Flood cure system – UV dose (J/cm²), (nitrogen)</u>	0.6 to 1.0

For complete surface cure and thorough cure, curing in nitrogen or curing between two substrates is required

* Minimum intensity recommended for curing system: 15 mW/cm²

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.

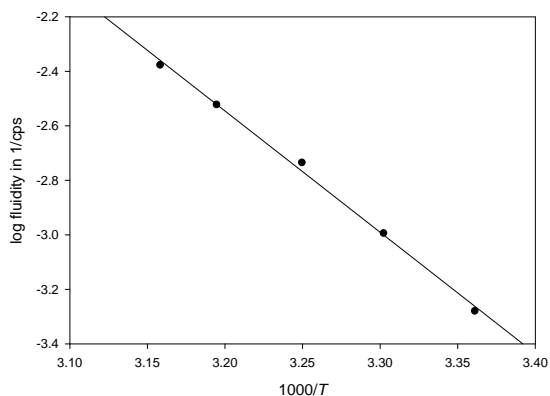
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Viscosity vs. temperature

Temperature (°C)	Viscosity (cps)
24.5	1,910
29.8	990
34.7	545
40.0	334
43.6	239

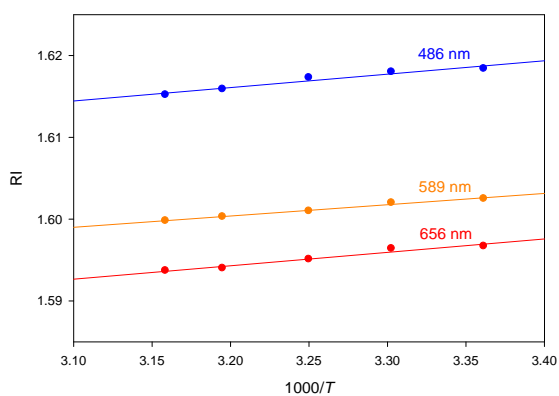
L2061-B log(fluidity) vs 1000/T



viscosity in cps = $10^{((4450/(273+T)) - 11.696)}$
 where T is temperature in °C

Refractive index vs. temperature

L2061-B RI vs 1000/T



Calculated Refractive Index (R.I) L2061-B

wavelength (nm)	function (T is temperature in °C)
589	R.I. = $1.5562 + 13.81/(273+T)$
486	R.I. = $1.5636 + 16.40/(273+T)$
656	R.I. = $1.5419 + 16.38/(273+T)$