

# AC L2007-12

## UV-Curable, High Temperature Resistant, Optical Clear Material

### Features

- High Tg
- High temperature resistant
- Minimum color change at high temperature
- High Hardness
- High depth of cure

### Description

- UV-Curable, optical material

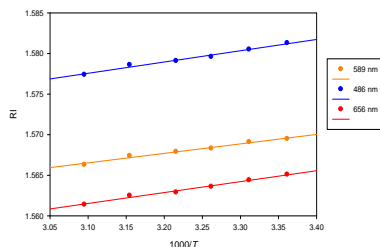
### Thermal Stability

- Optical Clear at high temperature



### Refractive index

- refractive index vs. temperature function



wavelength (nm) RI function (T is temperature in °C)

589	$R.I. = 1.5304 + 11.66 / (T + 273)$
486	$R.I. = 1.5345 + 13.89 / (T + 273)$
656	$R.I. = 1.5198 + 13.44 / (T + 273)$

### APPLICATIONS

Optical applications

### TYPICAL PROPERTIES

#### Liquid

Viscosity (cps, 25 °C)	10,500 to 12,500
Storage (°C)	15 to 25 °C
Shelf life (15 - 25 °C)	6 months
Pot life (15 - 25 °C)	3 months

#### Cured film

Shrinkage (linear, %)	< 0.3
Glass transition temperature (°C, DMA)	95 to 105
Hardness – Shore D	90
Depth of cure (mm)	>5

#### Refractive index of cured film (22.5°C)

@ 589 nm (D)	1.569
@ 486 nm (F)	1.581
@ 656 nm (C)	1.565

#### Abbe Number ( $V_d$ )

35

#### Coefficient of thermal expansion (DMA), 75 μm film

below Tg ( $\times 10^{-6}$ , °C <sup>-1</sup> )	23
above Tg ( $\times 10^{-6}$ , °C <sup>-1</sup> )	124

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

Elongation (%)	12
Modulus, psi (kgf/mm <sup>2</sup> )	100,000 (70)

#### Operating temperature (°C)

-40 to 140

#### UV curing conditions

Flood cure system – UV dose (J/cm<sup>2</sup>), (nitrogen) 0.6 to 1.0

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

\* Minimum intensity recommended for Spot lamp system: 500 mW/cm<sup>2</sup>

\*\* Intensity recommended for Flood lamp system: 49 WPCM or 125 WPI

### 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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