

# AC A535

## High Tg and Polishable UV-curable Adhesive

### Features

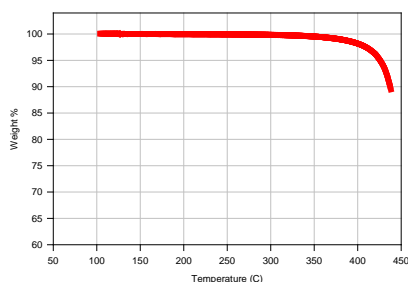
- High Tg
- UV-curable
- Excellent temperature resistance
- High hardness
- Polishable adhesive

### Description

- UV-curable epoxy adhesive

### TGA (Universal V3.0A TA)

Conditions: scan rate 20°C/min, in air



### APPLICATIONS

Bonding glass to glass or glass to metal.  
Suitable for hermetically seal applications and active alignment applications.

### TYPICAL PROPERTIES

#### Liquid

Viscosity (cps, 25 °C)	3,000 – 4,000
Storage (°C)	15 – 25
Shelf life (15 - 25 °C)	6 months
Pot life (15 - 25 °C)	3 months

#### Cured film

Outgas, weight % (125°C, 120 hr, air)	0.10
Water absorption (% , 100 °C until saturation)	0.7
Water permeability (g/m 24 hrs) (50 °C/95% RH, 75 µm film)	2.7 x 10 <sup>-4</sup>

Shrinkage (linear, %) < 0.5

Hardness – Shore D 95

Glass transition temperature (DMA, °C) 175

#### Refractive index of cured film (25°C)

@ 589 nm	1.578
@ 1310 nm	1.562
@ 1550 nm	1.558

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

below Tg (x10 <sup>-6</sup> ), °C <sup>-1</sup>	40
above Tg (x10 <sup>-6</sup> ), °C <sup>-1</sup>	82

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

Tensile strength, psi (Kg/mm <sup>2</sup> )	8,900 (6)
Elongation (%)	4
Modulus, psi (Kg/mm <sup>2</sup> )	340,000 (239)

#### UV curing conditions

##### Spot cure system – UV dose (J/cm<sup>2</sup>)

250 – 450 nm filter	30 – 50
320 – 500 nm filter	35 – 55

##### Flood cure system – UV dose (J/cm<sup>2</sup>)

2.0 – 3.0

\*\*\*Minimum intensity recommended for Spot lamp system: 300 mW/cm<sup>2</sup>

\*\*\*If a low intensity Spot lamp is used, intensity of 70 – 100 mW/cm<sup>2</sup>, we recommend a cure time of 7 to 10 minutes

\*\*\*Minimum intensity recommended for Flood lamp system: 125 WPI or 49 WPCm

\*\*\*A light source producing 220 to 380 nm is best match for this sealant. Cure speed or tack free time depends on the intensity of the UV source, thickness of adhesive layer, and transmission of the substrates.

\*\*\*Relative humidity for curing should be < 40%

### STORAGE

This product is light sensitive. It should be stored in the original container in a cool and dry place. It should be kept away from heat and light to obtain the maximum shelf life. Improper storage may result in gelation of the product.

### 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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