



BD-218-D

Dual cure optically clear resin

Features

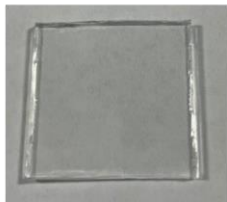
- Excellent optical clarity
- High Tg
- Low shrinkage
- UV-curable or heat curable
- Low viscosity
- Spin coat-able

Description

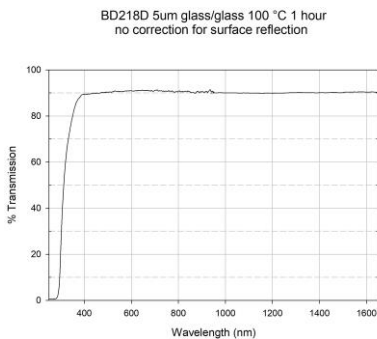
- Dual cure acrylate resin

Optically clear

BD-218 D between glass substrates
Cure at 110 °C for 60 minutes
Adhesive thickness: 2-4 micron



UV-VIS NIR spectra



APPLICATIONS

Optical bonding

CURING CONDITIONS: 2 curing ways: UV or heat

1) **UV CURING CONDITIONS:** BD-218-D is required to cure in nitrogen or in the absence of air or to be cured between two substrates

*Metal halide/Mercury: 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	50 sec or more	100	50 sec or more
or 200	25 sec or more	or 200	25 sec or more
or 300	15 sec or more	or 300	15 sec or more
or 400	10 sec or more	or 400	10 sec or more
or 500	5 sec or more	or 500	5 sec or more
or 1,000	2 sec or more	or 1,000	1 sec or more

2) **Heat curing:** the adhesive will cure by only heat, BD-218-D is required to cure in nitrogen or in the absence of air or to be cured between two substrates

- 100°C for 1 to 2 hrs
- or 110°C for 1 hr
- or 120°C for 1 hr
- 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

TYPICAL PROPERTIES

Before curing: liquid

Viscosity (cps, 25 °C)	420 to 480
Density (g/mL)	1.2
Storage (°C)	15 – 25
Shelf life (15 - 25 °C)	3 months
Pot life (15 - 25 °C)	1 month

After curing: cured film

Shrinkage (%)	3.0
Hardness – Shore D	90-95
Glass transition temperature (DMA, °C)	120
Specific heat (J/Kg °C)	1,200
Thermal Conductivity (W/m K)	0.2
Refractive index of cured film (25°C) @ 589 nm	1.50
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Tensile strength (MPa)	50
Elongation (%)	20
Young's Modulus (MPa)	2,000

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