

# UV 200

## UV Curable Acrylate

### Description

UV 200 is a low viscosity UV curable acrylate. The cured material has excellent flexibility, good toughness, low cure shrinkage and good adhesion to a variety of substrates, including metals, glass, ceramics and plastics. It is suitable for instant bonding or coating. It can be cured in seconds when exposed to ultraviolet light. It is suitable for bonding of electronic components.

### Application

UV curable acrylate adhesive designed for use in electric, electronic and automotive application.

### Guideline of use

- 1) Thaw the material to room temperature (25°C) before use.
- 2) Dispense the adhesive to bond surface by using a syringe. Ensure bond surfaces are clean and free from any contaminants prior to dispensing the adhesive.
- 3) Wipe off any excess uncured adhesive with a piece of cloth or tissue dabbed with isopropyl alcohol (IPA).
- 4) Cure the adhesive by expose it to long UV wavelength light in the 320-400 nm range at 420 mW/cm<sup>2</sup> for 10 seconds.
- 5) Increasing depth of cure require longer curing time to produce a tack free and cured material.

### Properties

Typical Properties	Test method	Unit	Typical value
<b>Uncured:</b>			
Chemical type	N/A	N/A	Urethane acrylate
Appearance	Pen 10	N/A	Yellowish transparent liquid
Specific gravity, 25°C	Pen 61	N/A	1.09
Viscosity, 25°C, 300rpm	Pen 44	cP	245
<b>Cured @ 320 - 400 nm, 420mW/cm<sup>2</sup> for 10 seconds per side, D bulb.</b>			
Fixture time <sup>3</sup>	Pen 43	second	≥4
Volatile content	Pen 34	%	0.5
CTE 1, before Tg	Pen 64	ppm/K	49
CTE 2, after Tg	Pen 64	ppm/K	-
Glass transition temperature	Pen 64	°C	78
Water absorption, @ 100°C, 1 hr	Pen 21	%	0.8
Hardness	Pen 29	Shore D	62
Tensile Strength	Pen 41	N/mm2	21
Elongation%	Pen 41	%	30

1. Most of the test methods correspond to American Standard Test Methods (ASTM).
2. The values above are tested based on batch to batch basis. These values are not use as a basis for preparing specifications.
3. Fixture time was determined by the time to develop lap shear strength of 0.1 N/mm<sup>2</sup>.
4. CTE = Coefficient of thermal expansion

- 6) Atmosphere oxygen may inhibit the surface cure and cause surface tacky. Increase the UV light intensity and cure the adhesive under inert gas, such as nitrogen or carbon dioxide, will prevent oxygen inhibition.
- 7) Air exhaust system is recommended during UV curing process.

The unopened original products have a shelf life of 6 months from the date of production.

### Packaging

- 10ml Black EFD Syringe
- 30ml Black EFD Syringe
- 500g Black Plastic Bottle

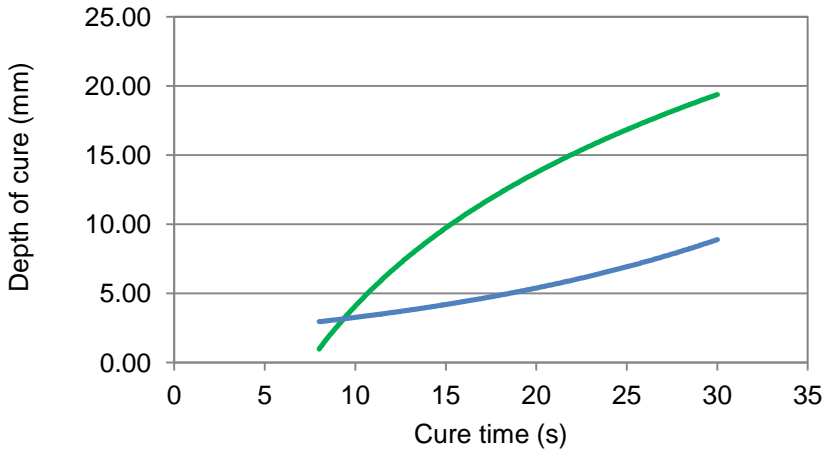
### Storage and Shelf Life

Store the product below -20°C and in a dark place. Tightly close original container of unused product. Do not store this product in an oxygen-free environment.

### Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

## Depth of cure



Remark:

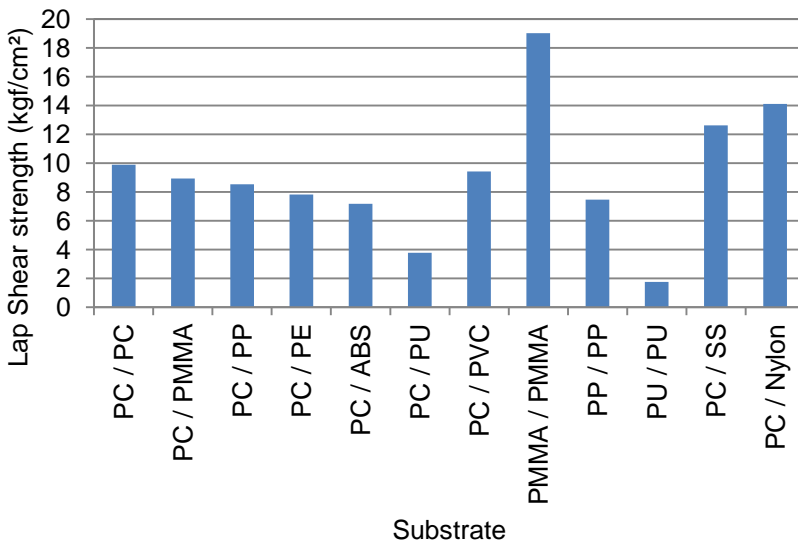
- Green curve: 420mW/cm<sup>2</sup>
- Blue curve: 130mW/cm<sup>2</sup>
- Cured with wavelength: 320 - 400 nm.

## Contact Information

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## Lap shear adhesion



Remark:

PC = Polycarbonate  
PMMA = Polymethylmethacrylate  
PP = Polypropylene  
PE = Polyethylene  
ABS = Acrylonitrile butadiene styrene  
PU = Polyurethane  
PVC = Polyvinylchloride  
SS = stainless steel

Cured @ 320 - 400 nm, for 20s seconds per side, D bulb, followed by secondary cure @ 50-60%RH at 25°C, 24hours. Test method: ASTM D3163 or ASTM D1002-01