



BD-312

UV-curable 2P Resin for Photo Replication Applications

Features

- Excellent replication characteristic
- High Tg
- UV-curable
- Good adhesion to plastic substrates
- Low viscosity
- Spin-coatable

Description

- UV-curable acrylate resin

APPLICATIONS

Multi-layers photo replicating resin for optical disc applications.

TYPICAL PROPERTIES

Before curing: liquid

Viscosity (cps, 25 °C)	380 – 450
Storage (°C)	15 – 25
Shelf life (15 - 25 °C)	4 months
Pot life (15 - 25 °C)	2 months

After curing: cured film

Outgas, weight % (125°C, 120 hr, air)	0.10
Water absorption (% , 100 °C until saturation)	0.3
Shrinkage (%)	3
Hardness – Shore D	90
Glass transition temperature (DMA, °C)	150
Refractive index of cured film (25°C) @ 589 nm	1.505
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Tensile strength, MPa	40
Elongation (%)	20
Modulus, MPa	1,600

UV curing conditions

UV dose (mJ/cm ² in nitrogen)	>100
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***A light source producing 250 to 400 nm is best match for this resin. Cure speed or tack free time depends on the intensity of the UV source, thickness of 2P resin layer, and transmission of the substrates.

PACKAGING

This product is packaged in 10 Kg or 18 Kg UV-block plastic containers.

STORAGE

This product is light sensitive. It should be stored in the original container in a cool and dry place at or below 25 °C (77 °F). 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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