

# Crystal® UVV

## UV-CURING JET INK VARNISHES FOR DISPLAY GRAPHICS

**INK PROFILE:**

Crystal® UVV are Ink Jet Printable UV-Curing varnishes for use on display graphics media substrates including flexible, semi-flexible and rigid display media, such as:

- Plexiglass
- Di-Bond
- ABS Display Media
- Vinyl
- Calendared Vinyl

The products are intended for jetting through Piezo DOD printheads at elevated temperatures.

These formulations have been designed to offer:

- Flexibility
- Surface Hardness
- Scratch Resistance

Adhesion to olefinic plastics such as polyethylene and polypropylene can be achieved after adequate surface treatment. The varnishes are primarily used on UV-curing ink images to create "Spot-Varnish" effects.

The varnishes also have the ability to provide a solution to differential gloss issues in unprinted image areas.

**TYPICAL PHYSICAL PROPERTIES:**

PROPERTY	RANGE
Viscosity cps @30C	22-24
@40C	16-18
@50C	12-13
@60C	8-10
Surface Tension (dynes/cm)	24-28
Cure Dose (mJ/cm <sup>2</sup> ) ('H' bulb - un-doped)	<100

**CURING INFORMATION:**

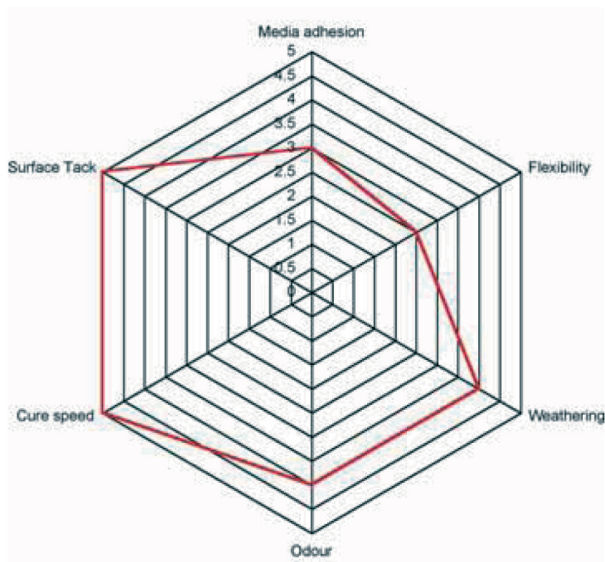
Actual cure dose required will depend upon ink thickness, substrate and the UV-curing lamps being used. The above stated value of <100mJ/cm<sup>2</sup> is a typical dose required with an un-doped medium pressure mercury lamp ("H" bulb/spectrum), when curing an 8-15 micron thick layer. In general cure doses may be reduced somewhat as higher intensity (greater irradiance) sources are used.

**SHELF LIFE:**

12 months

**MATERIAL & TEMPERATURE COMPATIBILITY:**

Compatible materials which can be kept in long term contact with the inks include: Stainless steel, PTFE, EPDM, PP, PE (LD&HD). Incompatible materials include: Butyl rubber, Viton, nitrile, PU-rubbers, Neoprene, PVC, Brass. Ideally the inks should be stored between 5 and 40°C. Inks can be used in jetting equipment up to 55°C. Prolonged exposure to temperatures above 55°C should be avoided.

**INK POSITIONING CHART:**


This information has been carefully compiled from experience gained in the laboratory and under commercial conditions. However, the product's performance and its suitability for the customer's purpose depend on the particular conditions of use. We recommend that customers satisfy themselves that each product meets their requirements in all respects. Subject to change without notice. All sales are subject to our standard terms and conditions of sale.