

DATA SHEET provisional

JET-144: Inkjet Compatible Low RI Optical Material

JET-144 (previously JET-144-xp3) is a low viscosity low refractive index UV curable coating suitable for ink jet applications.

Surface tension and viscosity are compatible with some widely used piezoelectric DOD print-heads.

The refractive index is 1.44 at 589 nm.

Adhesion to glass like materials is excellent. Good adhesion to many plastic substrates.

Properties

	Liquid state
RI liquid at 589 nm	1.419
Density, g/cm ³	1.22
Viscosity, cps @ 25°C	13
Surface tension, dyne/cm	26.7
Color	Clear, slight yellowish (clears up upon curing)
	Cured state
RI cured at 589 nm	1.443
RI cured at 1550 nm, estimated	1.435
Minimum Curing Energy (mercury lamp)	1-2 J/cm ²
Density, g/cm ³	1.29
Adhesion to glass	Very good, > 1400 g/cm
Surface cure (mercury lamp)	Good (non tacky)
Mechanical appearance	Flexible coating
Modulus of Elasticity, MPa	3
Tensile strength, MPa	0.5
Elongation to break, %	90
Lowest boiling point component/ % in formulation	200°C/ 8%

The product is supplied pre-filtered to below 1 micron particles.

Storage

1. Avoid unnecessary exposure to ambient light.
2. The shelf life is 12 months in sealed bottles.

Application

Curing can be achieved by any source of UV at 300-400nm under inert conditions. A dose of 3000-4000 mJ/cm² is necessary. Although inert atmosphere is preferred, curing in air is also suitable. The use of a mercury lamp having both low wavelength (250-280 nm) and high wavelength (365nm) is recommended for best surface cure performance.

Keep the bottle closed in all times when not in use.

Safety: Refer to the SDS

Note: The above information is believed to be reliable, but it is not to be taken as a representation, warrantee or guarantee. Customers should perform their own QC, QA and evaluation tests.

Updated: February 2, 2023