

## TECH DATA SHEET

# ILR-1457 – HIGH TEMPERATURE STABLE RESIN (FM21-8)



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## DESCRIPTION

ILR-1457 is a proprietary high molecular weight functionalized polyimide designed specifically to resist degradation when exposed to elevated temperatures for extended durations. ILR-1457 is supplied in solution (~25 wt.%) in NMP solvent for convenient application. When dried of solvent and cured, ILR-1457 produces a tough, flexible, film with excellent properties.

## HIGHLIGHTS

- Thermally Curable
- Tough
- Superior thermal stability
- Hydrophobic

## TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	METHOD	RESULT
Appearance at Room Temperature	Visual	Amber liquid
Resin content (in NMP)	Gravimetric	~25 %
Decomposition temperature (cured) - Td(5%)	TGA	527 °C
CTE $\alpha_1/\alpha_2$ (cured)	TMA	32/57 ppm/ °C
Tg (cured)	TMA	N/A
	DMA	~203 °C
Modulus @ 25°C	DMA	490 MPa
Electrical properties – Dielectric Constant (DK)	Cavity Perturbation Method @ 20 GHz	2.4
Electrical properties – Dissipation Factor (Df)	Cavity Perturbation Method @ 20 GHz	0.0035
Elongation	Instron	10 %
Tensile Strength	Instron	29.4
Moisture Absorption	85°C/85% RH, 168 hr.	0.09 %
Water Absorption	23°C, 24 hr. immersion	0.20 %
Recommended Storage Temp		Room temperature

*Data is for reference only and we recommend use of this data as a guide..*

## RECOMMENDED APPLICATION:

For use in various applications that require high temperature resin performance.

## INSTRUCTIONS FOR USE:

**APPLICATION - ILR-1457** MAY BE APPLIED BY NORMAL MEANS – SPIN COATING, DISPENSE TECHNIQUES OR EVEN JETTING.

**DRYING - ILR-1457** MUST BE DRIED COMPLETELY TO REMOVE THE SOLVENT PRIOR TO CURING

**CURING - ILR-1457** CURING TEMPERATURE WINDOW IS 200°C - 250°C WITH CURING TIMES DEPENDENT ON THE SELECTED CURING TEMPERATURE.

## CONTACT:

### REQUEST A SAMPLE OR PLACE AN ORDER

Customer Support

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REF: DMI Part Number: R1457