

# TECH DATA SHEET

## BMI-689-C



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### DESCRIPTION

BMI-689-C is a unique low viscosity liquid bismaleimide based on a non-hydrogenated dimer diamine backbone. The material comes pre-catalyzed for thermal curing and forms tough, hydrophobic, cross-linked polyimides. The material has excellent low pH hydrolytic resistance and thermal stability. The nature of this BMI allows it to be used in a variety of applications including mixed cure systems (e.g. epoxy and BMI), mixed BMI systems or where a low viscosity, free radical cured resin is required. It is soluble in most aromatic and aliphatic solvents such as toluene, xylene, NMP, etc.

### HIGHLIGHTS

• Pre-catalyzed	• Solvent free
• Low viscosity liquid BMI	• Superior thermal stability
• Hydrophobic	

### TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	METHOD	RESULT
Appearance at Room Temperature	Visual	Yellow to brown liquid
Functionality		2
Molecular Weight (approx.)		689 Daltons
Weight Loss @ 300°C	TGA (neat)	< 1.0 %
Viscosity (cP at 25°C)	Cone and Plate @ 5 rpm	1,500 ± 500 cP
Decomposition Temperature	TGA	> 400 °C
Recommended Storage Temp		+5°C or Colder
Continuous Use Temp		< 180 °C (for continuous use)

*Data is for reference only and may vary depending on testing method used.*

### RECOMMENDED FORMULATION USE:

BMI-689-C is recommended for use as a catalyzed additive or base resin in adhesives that are designed for high temperature resistance. It has excellent adhesion to a variety of organic substrates and adhesion to metals can be enhanced via coupling agents. When used as a base resin, it can produce films that are tough, flexible and demonstrate good peel strength.

### CURING RECOMMENDATIONS:

BMI-689-C is designed for thermal curing. A minimum of one hour at 150°C is a recommended starting point. Higher temperatures (up to 175 – 180°C) will result in significantly shorter cure time requirements. Curing below 150°C is not recommended. Due to its solvent free nature the curing of BMI-689-C is generally independent of ramp rate – both hot plate or oven are acceptable curing devices. Nitrogen atmosphere is not required but may reduce any oxygen poisoning that may occur on the surface of the material.

### CONTACT:

#### REQUEST A SAMPLE OR PLACE AN ORDER

Customer Support

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