TECH DATA SHEET

DMI-7006

DESCRIPTION

DMI-7006 is a high molecular weight, curable bismaleimide (BMI) oligomer mixture suitable for use as the base resin in a variety of microelectronic assembly applications. The resin is supplied pre-dissolved in anisole (methoxy benzene) for ease of incorporation. The unique **DMI-7006** joins the nature of a thermoplastic resin (flexibility, high strength) and a BMI thermoset resin (curability, hydrophobicity, ease of customer use) together with superior electrical properties for the next generation of high frequency applications.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	CONDITIONS	RESULT
Appearance at Room Temperature	Visual	Amber Liquid
Resin content	Gravimetric	25%
Viscosity @ 25°C	Cone & Plate @ 5 RPM	370 cP
Glass Transition (Tg) dependent upon cure conditions:		
• 185°C cure for 1 hour (catalyzed w/ 2 phr DCP)	TMA	189°C
• 215°C cure for 1 hour (homocure)	TMA	207°C
• 250°C cure for 1 hour (homocure)	TMA	242°C
Coefficient of Thermal Expansion (CTE, α1)	TMA	26 ppm/°C
Water Absorption	24 hr. immersion @ 23ºC	0.29%
Tensile Strength @ 25ºC	Instron	87 MPa
Modulus @ 25ºC	DMA	2 GPa
Dielectric Constant (Dk) @ 20GHz	Cavity Perturbation Method @ 20GHz	2.65
Dissipation Factor (Df) @ 20GHz		0.005
Flammability	UL94	V-0
Recommended Storage Temp		Room Temperature

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

RECOMMENDED FORMULATION USE:

DMI-7006 is recommended for use as a polyimide (PI) replacement resin in FCCL and CCL applications. The material has excellent green strength in film form prior to curing. Sub-200ºC curing is possible with the addition of a peroxide free-radical catalyst or the material may be homocured (no catalyst) at higher temperatures to increase the Tg.

As delivered, DMI-7006 is formulated with copper adhesion promoting additives to insure adequate bonding during lamination without the need for a separate adhesive layer. DMI-7006 is supplied without a curing catalyst. If a catalyst is to be used DMI recommends dicumyl peroxide at 2 phr of resin content.

Film formation should include a drying step sufficient to remove the anisole solvent in the mixture. Depending upon film thickness 110 – 115ºC for one or more hours is generally sufficient.

CONTACT:

REQUEST A SAMPLE OR PLACE AN ORDER

Customer Support
☎ 858-348-1122
✉ support@designermoleculesinc.com

REF: DMI Part Number: R1376