Polymics
Concept to Solution®

www.polymics.com

MATERIAL PROCESS DESIGN

STATIMAX ®

Statimax® is a comprehensive portfolio of Polymics' application specific product line that provides solutions to back-end testing, inspection testing, and similar critical application requirements.

Statimax® product line of specialty polymer formulations are available as injection molded, extruded, or compression molded stock shapes, ready to be used for burn-in and test sockets (BiTS), and handling components to protect sensitive electronic and magnetic equipment from damage. Electrostatic discharge (ESD) is controlled with conductive thermoplastic compounds that dissipate electric charge before they accumulate to dangerous levels.

BENEFITS

DIMENSIONAL STABILITY SUCH THAT CAPABLE FOR FINE PITCH FEATURES:
a. stable at high temperatures (150 °C and above) so high Tg or high melting or reinforced. (T)
b. Stable to or not sensitive to environment, cleaning solvent, chemical or moisture (W)
c. Stable to stress/force i.e. Mechanically strong or high compressive modulus (F)

THERMALLY STABLE AT CONTINUAL HIGH TEMPERATURE ESPECIALLY FOR BURN IN

WEAR RESISTANCE FROM REPETITIVE CONTACT MOTIONS

PROCESSABILITY, EASY TO MACHINE BUT NO BURR FROM DRILLING OR SURFACE MACHINING

ESD PROTECTION FOR SENSITIVE ELECTRONICS

ECONOMICAL AND FAST CHANGE OVER FOR DIVERSE DESIGN OF TEST SOCKETS

PRODUCT SELECTION GUIDE - ESD

ESD Max Temperature	SHIELDING	CONDUCTIVE	DISSIPATIVE	ANTI-STATIC	INSULATIVE	BASE RESIN
350 °C	STATIMAX 800	STATIMAX 810	STATIMAX 820	STATIMAX 830	STATIMAX 840	PBI
	STATIMAX 670		STATIMAX 672		STATIMAX 674	PEKK
	STATIMAX 650		STATIMAX 652		STATIMAX 654	
300 °C	STATIMAX 610		STATIMAX 612		STATIMAX 614	
	STATIMAX 500	STATIMAX 510	STATIMAX 520	STATIMAX 530	STATIMAX 540	PAEK
	STATIMAX 400	STATIMAX 410	STATIMAX 420	STATIMAX 430	STATIMAX 440, STATIMAX 441, STATIMAX 442	PEEK
250 °C						
200 °C	STATIMAX 200	STATIMAX 210	STATIMAX 220	STATIMAX 230	STATIMAX 240	PEI
150 °C						
			STATIMAX 020			UPE
100 °C			STATIMAX 120			PC
Room Temperature						

POLYMICS STATIMAX COMPOUNDS COVER THE FOLLOWING CRITICAL CATEGORIES

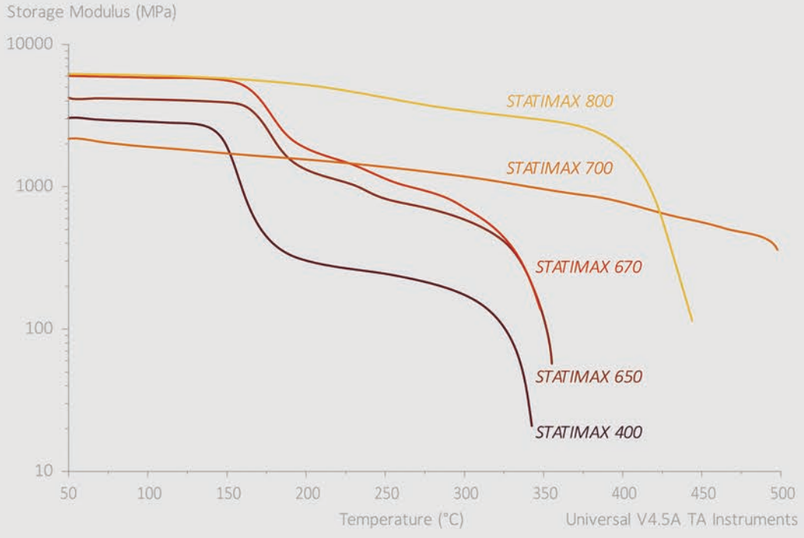
SHIELDING	Typical resistivity 10E1-10E4 absorb or reflect electromagnetic energy to prohibit interference
CONDUCTIVE	Typical resistivity 10E1-10E6 bleed off strong electric charges to ground pathway
DISSIPATIVE	Typical resistivity 10E6-10E12 resistance is strong allows decay of electric charges faster than Anti-Static
ANTI-STATIC	Typical resistivity 10E10-10E12 slow but consistent charge decay
INSULATIVE	Designed to prohibit transmission of electric charge

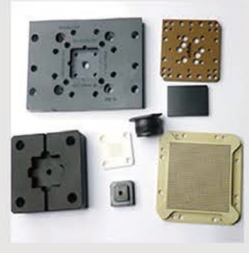
STATIMAX® AVAILABLE SIZES/SHAPES

ROD	STANDARD PROCESS	DIMENSION	TYPICAL MATERIAL
	HCM INJ EXT DF	**OD** 6 ~ 50mm **LENGTH** up to 1000mm	PEEK PBI PEI PI
PLATE			
		**LENGTH** up to 300mm **WIDTH** up to 300mm **THICKNESS** up to 25mm	
DISC			
		**OD** 50 ~ 400mm **THICKNESS** 6 ~ 50mm	
NEAR NET			
AS DESIGN	INJ DF	**AS DESIGN**	

- All values listed are target values for standard stock shapes unless otherwise noted.
- Denotes actual tested value.
- Specialty material upon request.

THERMAL-MECHANICAL PROPERTIES OF TYPICAL STATIMAX® PRODUCT LINES





Note: Each Statimax® product line maybe offered in different ESD ranges from INSULATIVE for BiTS needs to CONDUCTIVE or SHIELDING for protecting sensitive electronic components.

SUMMARY

Polymics' Statimax® product line covers the entire spectrum for both temperature and electrical properties (see Product Selection Guide & DMA). Polymics utilizes numerous forms of carbon, ceramics, metal, polymeric additives and alloys to facilitate achieving performance objectives and processing requirements.