

DENKA TX POLYMER

MS (Methyl methacrylate-Styrene Copolymer)

Summary

TX POLYMER developed by Denka's unique copolymer technology.

It has excellent transparency, optical property close to PMMA. Furthermore, TX POLYMER has excellent dimension stability, it is widely used for optical sheets.

Characteristics

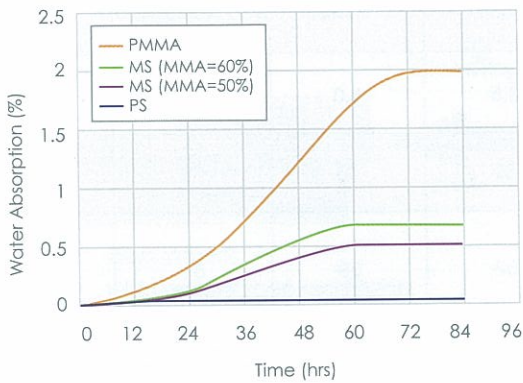
TX POLYMER resolved most of the disadvantages of PMMA.

Examples: Features comparison between TX-100S with PMMA.

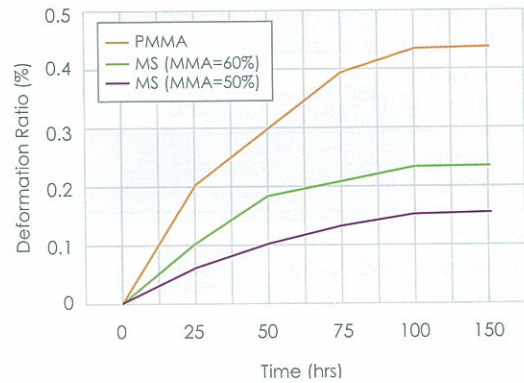
1. Easy to process – Excellent molding stability and thermal stability.
2. Low density – Immediate cost saving. Specific gravity approx. 5% lower than PMMA.
3. Lower moisture absorption – Approx. 2 times of dimension stability.

Products Comparison

Water absorption



Dimension stability



Applications



Light Guide Panel



Cups



Cosmetics



Households

DENKA TX POLYMER

(General Properties)

Properties	Methods	Conditions	Units	TX-100S	TX-800LF	cf.)PMMA
				Standard	Optical	
MMA Contain	–	–	%	≒60	≒50	100
Refractive Index	ASTM D542	Na-D ray	–	1.54	1.55	1.49
Total Luminous Transmittance	ISO 13468-1 (JIS K7361)	2mmt	%	92	92	93
Haze	ISO 14782 (JIS K7136)	2mmt	%	0.2	0.2	0.2
MFR	ISO 1133 (JIS K7210)	200°C, 49N	g/10min	1.8	1.6	0.4
		230°C, 37.3N	g/10min	9.2	8.0	2.0
Tensile Stress at Break	ISO 527-1.2 (JIS K7161)	5mm/min	MPa	67	64	74
Flexural Stress	ISO 178 (JIS K7171)	2mm/min	MPa	115	113	120
Flexural Modulus			MPa	3,400	3,400	3,300
Charpy Impact Strength	ISO 179 (JIS K7111)	Notched, 23°C	KJ/m ²	2	2	2
Vicat Softening Temperature	ISO 306 (JIS K7206)	50N	°C	100	100	105
Deflection Temperature Under Load	ISO 75-1.2 (JIS K7191-1.2)	Flat Wise 1.82MPa Un Annealed	°C	80	80	85
		Flat Wise 1.82MPa Annealed	°C	99	99	104
Density	ISO 1183 (JIS K7112)	23°C	Kg/m ³	1,127	1,111	1,190
Rockwell Hardness	ISO 2039-2 (JIS K7202)	23°C	M scale	84	77	82
Flammability	UL94 (UL File No. E49895)			HB	HB	–
Japan Hygienic Olefin and Styrene Plastic Association Regulation				√	√	–