

## Overview XILOY™ IG grades

For engineering plastics applications

Polyscope developed styrene maleic anhydride N-Phenylmaleimide (SMANPMI)/Polyamide (PA) based injection molding compounds with:

- high dimensional stability
- low water absorption
- low creep at elevated temperatures
- stable performance over wide temperature range

### Mechanical properties

	Unit	XILOY™ IG300 IM	XILOY™ IG360 IM	XILOY™ IG360	Test method
<b>Impact properties</b>					
		DAM / Cond. <sup>1</sup>	DAM / Cond. <sup>1</sup>	DAM / Cond. <sup>1</sup>	
Charpy notched impact (23°C)	kJ/m <sup>2</sup>	11 / 11	12 / 13	9 / 9	ISO 179/1eA
Charpy notched impact (-40°C)	kJ/m <sup>2</sup>	6 / 5	10 / 10	9 / 8	ISO 179/1eA
Charpy unnotched impact (23°C)	kJ/m <sup>2</sup>	NB / NB	60 / 55	30 / 24	ISO 179/1eU
<b>Tensile properties</b>					
Tensile stress at break (50 mm/min)	N/mm <sup>2</sup>	46 / 37	120 / 110	140 / 125	ISO 527-2
Elongation at break (50mm/min)	%	36 / 69	3 / 3.5	2 / 2.3	ISO 527-2
E-modulus (1mm/min)	N/mm <sup>2</sup>	2250 / 1550	8900 / 7500	11000 / 9300	ISO 527-2
<b>Flexural properties</b>					
Flexural strength	N/mm <sup>2</sup>	70 / 60	214 / 180	240 / 200	ISO 178
Flexural modulus	N/mm <sup>2</sup>	2000 / 1550	9500 / 8000	11000 / 9500	ISO 178

### Thermal properties

	Unit	XILOY™ IG300 IM	XILOY™ IG360 IM	XILOY™ IG360	Test method
Vicat (50N, 120 K/h)	°C	139	158	172	ISO 306
HDT-A (1.80 MPa) dry	°C	93	161	169	ISO 75
HDT-A (1.80 MPa) conditioned <sup>1</sup>	°C	na	160	na	
Flammability properties	--	HB	HB	HB	UL 94

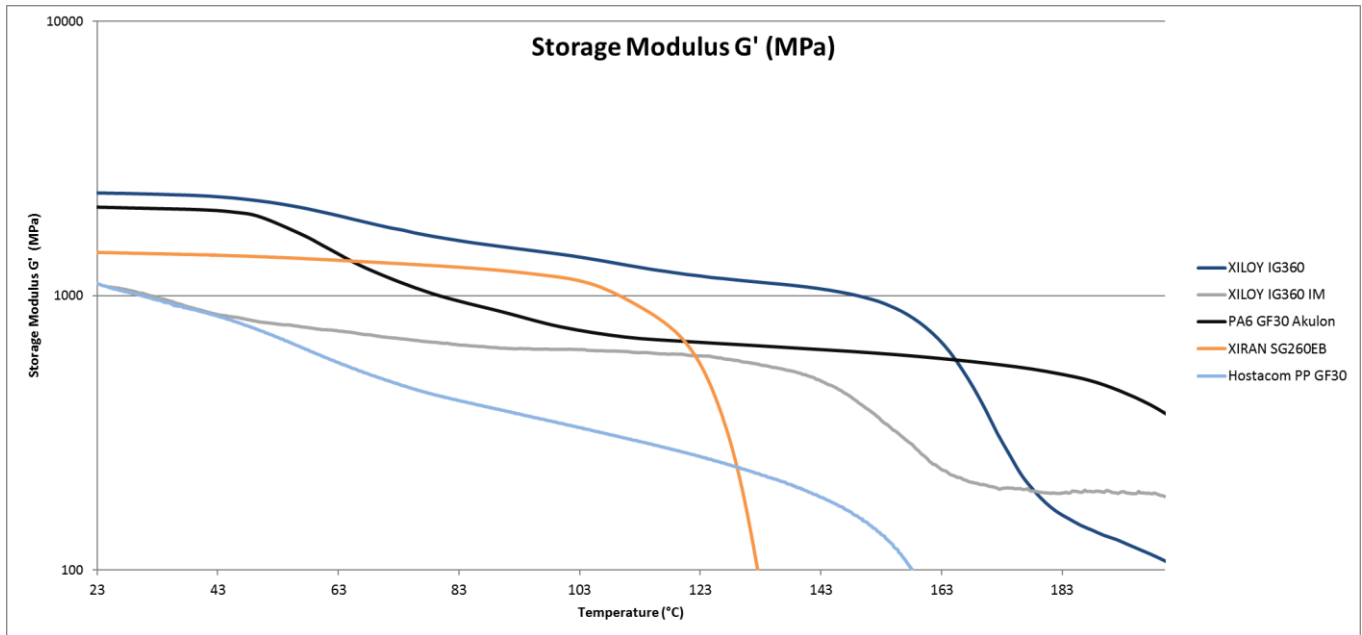
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### Specific properties

	Unit	XILOY™ IG300 IM	XILOY™ IG360 IM	XILOY™ IG360	Test method
Density	g/cm <sup>3</sup>	1.09	1.32	1.35	ISO 1183
Melt flow index at 240°C and 100N	dg/min	21	5	5	ISO 1133
Spiral flow length <sup>2</sup>	cm	40	33	40	Internal
Water absorption at 50% RH	%	na	0.63	0.66	ISO 62
Water absorption at 100% RH	%	na	2.34	2.40	ISO 62

### DMTA Graphs



### Notes

1. ISO 1110: 70°C, 62%RH until 95%.
2. Measured on Polyscope SSL mold. Thickness 2mm.  $p_{inj} = 70$  bar,  $T_{inj} = 260$  °C,  $v_{inj} = \max$ ,  $T_{mould} = 65$  °C.

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