SABIC Innovative Plastics™

Xenoy* Resin IQ1103

Americas: COMMERCIAL

Xenoy iQ*1103 resin - Environmentally responsible and sustainable low carbon footprint resin. Xenoy iQ1103 is an unreinforced, impact modified alloy of PC (polycarbonate) + Valox iQ* PBT (polybutylene terepthalate) resin with excellent low temperature impact and chemical resistance. Range gray, black and colors except bright whites.

Post-consumer usage: Each 1kg of Xenoy iQ1103 resin is made from approximately 0.33 kg of post-consumer content.

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	45	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	46	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D 638
Tensile Modulus, 50 mm/min	2050	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	74	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2000	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	49	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	150	%	ISO 527
Tensile Modulus, 1 mm/min	1950	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Flexural Modulus, 2 mm/min	1920	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	650	J/m	ASTM D 256
Izod Impact, notched, -30°C	600	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	50	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	47	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	117	°C	ASTM D 1525

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	99	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D 648
CTE, -40°C to 150°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 150°C, xflow	9.5E-05	1/°C	ASTM E 831
CTE, -30°C to 80°C, flow	9.E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	9.5E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	115	°C	ISO 306
Vicat Softening Temp, Rate B/120	117	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	76	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.8 - 1.2	%	SABIC Method
Melt Flow Rate, 250°C/5.0 kgf	13	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/5.0 kg	12	cm³/10 min	ISO 1133

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	110	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	255 - 275	°C
Nozzle Temperature	250 - 265	°C
Front - Zone 3 Temperature	250 - 270	°C
Middle - Zone 2 Temperature	245 - 265	°C
Rear - Zone 1 Temperature	240 - 260	°C
Mold Temperature	40 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 80	rpm
Shot to Cylinder Size	50 - 80	%
Vent Depth	0.013 - 0.02	mm