SABIC Innovative Plastics™

Xenoy* Resin X5410

Americas: COMMERCIAL

Mineral filled PC+PET resin with high heat dimensional stability for paint systems. It has very low CTE and excellent flow - impact balance for automotive exterior applications, like body panels, tailgates, spoilers, rockerpanels or tankflaps

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	56	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	45	MPa	ASTM D 638
Tensile Stress, yld, Type I, 10 mm/min	56	MPa	SABIC - Japan Method
Tensile Stress, brk, Type I, 10 mm/min	45	MPa	SABIC - Japan Method
Tensile Strain, yld, Type I, 5 mm/min	4.2	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	38.7	%	ASTM D 638
Tensile Strain, yld, Type I, 10 mm/min	67	%	SABIC - Japan Method
Tensile Strain, brk, Type I, 10 mm/min	100	%	SABIC - Japan Method
Tensile Modulus, 5 mm/min	3230	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2990	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	26	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.1	%	ISO 527
Tensile Strain, break, 5 mm/min	12.1	%	ISO 527
Tensile Modulus, 1 mm/min	3190	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	93	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	87	J/m	ASTM D 256
Izod Impact, notched, -30°C	82	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	54	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	137	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	129	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	109	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	134	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	121	°C	ASTM D 648
CTE, -40°C to 60°C, flow	5.86E-05	1/°C	ASTM E 831
CTE, -40°C to 60°C, xflow	7.05E-05	1/°C	ASTM E 831
CTE, -30°C to 80°C, flow	5.81E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.01E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306

HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	128	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.27	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.65 - 0.75	%	SABIC Method
Melt Flow Rate, 250°C/2.16 kgf	0.2	g/10 min	ASTM D 1238
Melt Flow Rate, 265°C/2.16kg	19	g/10 min	ASTM D 1238
Density	1.26	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.42	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.14	%	ISO 62
Melt Flow Rate, 250°C/2.16 kg	0	g/10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/2.16 kg	0	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/2.16 kg	17	cm³/10 min	ISO 1133

Source GMD, last updated:06/28/2005

Processing

Parameter Injection Molding	Value	Unit
Drying Temperature	110	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 275	°C
Nozzle Temperature	255 - 270	°C
Front - Zone 3 Temperature	255 - 275	°C
Middle - Zone 2 Temperature	250 - 270	°C
Rear - Zone 1 Temperature	245 - 265	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 80	rpm
Shot to Cylinder Size	50 - 80	%
Vent Depth	0.013 - 0.02	mm

Source GMD, last updated:06/28/2005

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.

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