Generic ABS+PC

Polycarbonate + ABS

Generic

Message:

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This information is provided for comparative purposes only.

General Information			
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.10 - 1.22	g/cm³	ASTM D792
23°C	1.09 - 1.22	g/cm³	ISO 1183
--	1150	kg/m³	ISO 1183 [1]
--	1.10 - 1.23	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)			
260°C/5.0 kg	5.7 - 26	g/10 min	ASTM D1238
260°C/5.0 kg	11 - 29	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)			
260°C/5.0 kg	8.00 - 26.2	cm³/10min	ISO 1133
--	16.6	cm³/10min	ISO 1133 [2]
Spiral Flow	8.30 - 68.6	cm	
Molding Shrinkage			
Flow: 23°C	0.38 - 0.74	%	ASTM D955
Transverse flow: 23°C	0.37 - 0.60	%	ASTM D955
23°C	0.48 - 0.60	%	ISO 294-4
Flow	0.60	%	ISO 2577 [3]
Transverse flow	0.60	%	ISO 2577 [4]
Water Absorption			
23°C, 24 hr	0.096 - 0.22	%	ASTM D570
23°C, 24 hr	0.088 - 0.70	%	ISO 62
Saturated, 23°C	0.10 - 0.61	%	ASTM D570
Saturated, 23°C	0.19 - 0.71	%	ISO 62
Saturation	0.60	%	ISO 62 [5]
Equilibrium, 23°C	0.10 - 0.40	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.062 - 0.21	%	ISO 62
Balance	0.20	%	ISO 62 [6]
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
23°C	108 - 120		ASTM D785
23°C	90 - 121		ISO 2039-2

Durometer Hardness (23°C)	80		ISO 868
Ball Indentation Hardness	84.5 - 115	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
23°C	1850 - 3050	MPa	ASTM D638
23°C	1950 - 2860	MPa	ISO 527-2
--	2700	MPa	ISO 527-2 [7]
Tensile Strength			
Yield, 23°C	43.3 - 65.6	MPa	ASTM D638
Yield, 23°C	44.7 - 66.4	MPa	ISO 527-2
Yield	54.2	MPa	ISO 527-2 [8]
Fracture, 23°C	32.0 - 63.4	MPa	ASTM D638
Fracture, 23°C	39.7 - 55.3	MPa	ISO 527-2
23°C	46.7 - 60.4	MPa	ASTM D638
23°C	47.6 - 70.0	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	1.5 - 5.2	%	ASTM D638
Yield, 23°C	3.0 - 5.8	%	ISO 527-2
Yield	4.0	%	ISO 527-2 [9]
Fracture, 23°C	26 - 100	%	ASTM D638
Fracture, 23°C	27 - 100	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	49 - 52	%	ISO 527-2
Flexural Modulus			
23°C	1880 - 2750	MPa	ASTM D790
23°C	2040 - 2820	MPa	ISO 178
Flexural Strength			
23°C	71.4 - 98.9	MPa	ASTM D790
23°C	73.8 - 100	MPa	ISO 178
Yield, 23°C	67.0 - 105	MPa	ASTM D790
Fracture, 23°C	65.0 - 90.1	MPa	ASTM D790
Coefficient of Friction	0.16 - 0.21		ASTM D1894
Taber Abrasion Resistance (23°C)	62.6 - 70.2	mg	ASTM D1044
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	9.2 - 81	kJ/m^2	ISO 179
Notched Izod Impact			
23°C	48 - 710	J/m	ASTM D256
23°C	9.8 - 57	kJ/m^2	ISO 180
Unnotched Izod Impact (23°C)	100 - 2200	J/m	ASTM D256
Instrumented Dart Impact			
23°C	39.5 - 65.5	J	ASTM D3763
23°C	24.3 - 105	J	ISO 6603-2
Dart Drop Impact (23°C)	36.1 - 60.9	J	ASTM D3029

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	89.0 - 131	°C	ASTM D648
0.45 MPa, not annealed	89.7 - 131	°C	ISO 75-2/B
0.45 MPa, annealed	97.3 - 125	°C	ISO 75-2/B
0.45 MPa	109	°C	ISO 75-2 [10]
1.8 MPa, not annealed	79.3 - 122	°C	ASTM D648
1.8 MPa, not annealed	78.9 - 117	°C	ISO 75-2/A
1.8 MPa, annealed	103 - 120	°C	ASTM D648
1.8 MPa, annealed	99.0 - 113	°C	ISO 75-2/A
1.8 MPa	96.0	°C	ISO 75-2 [11]
Continuous Use Temperature	60.0 - 100	°C	ASTM D794
Vicat Softening Temperature			
--	104 - 142	°C	ASTM D1525
--	93.2 - 140	°C	ISO 306
50°C/h, B (50N)	114	°C	ISO 306 [12]
Ball Indentation Temperature	80.0 - 125	°C	IEC 60598-1
Linear thermal expansion coefficient			
Flow	6.5E-5 - 1.0E-4	cm/cm/°C	ASTM D696
Flow	6.0E-5 - 7.6E-5	cm/cm/°C	ASTM E831
Flow	5.8E-5 - 8.6E-5	cm/cm/°C	ISO 11359-2
Flow	7.6E-5	cm/cm/°C	ISO 11359-2 [13]
Lateral	7.1E-5 - 8.3E-5	cm/cm/°C	ASTM D696
Lateral	6.9E-5 - 7.5E-5	cm/cm/°C	ASTM E831
Lateral	7.0E-5 - 8.2E-5	cm/cm/°C	ISO 11359-2
Lateral	8.0E-5	cm/cm/°C	ISO 11359-2 [14]
Thermal Conductivity			
23°C	0.20 - 0.35	W/m/K	ASTM C177
23°C	0.18 - 0.21	W/m/K	ISO 8302
RTI Elec	60.0 - 90.4	°C	UL 746
RTI Imp	60.0 - 90.0	°C	UL 746
RTI	60.0 - 90.4	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity			
--	1.0E+3 - 2.5E+15	ohms	ASTM D257
--	5.5E+10 - 1.0E+16	ohms	IEC 60093
--	3.8E+14 - 1.0E+17	ohms	IEC 60093 [15]
Volume Resistivity			
23°C	1.0 - 5.0E+16	ohms·cm	ASTM D257
23°C	1.0E+13 - 2.5E+16	ohms·cm	IEC 60093
--	1.0E+13 - 1.1E+14	ohms·m	IEC 60093 [16]
Dielectric Strength			

23°C	19 - 38	kV/mm	ASTM D149
23°C	15 - 37	kV/mm	IEC 60243-1
--	33	kV/mm	IEC 60243-1 [17]
Dielectric Constant			
23°C	2.99 - 3.00		ASTM D150
23°C	3.00 - 3.10		IEC 60250
23°C	2.95		IEC 60250
100 Hz	3.20		IEC 60250 [18]
1 MHz	3.10		IEC 60250 [19]
Dissipation Factor			
23°C	4.7E-3 - 0.010		ASTM D150
23°C	2.0E-3 - 0.050		IEC 60250
100 Hz	5.0E-3		IEC 60250 [20]
1 MHz	8.0E-3		IEC 60250 [21]
Arc Resistance	117 - 123	sec	ASTM D495
Comparative Tracking Index			
--	218 - 600	V	IEC 60112
--	311		IEC 60112 [22]

Flammability	Nominal Value	Unit	Test Method
Burning Rate	0.0 - 100	mm/min	ISO 3795
Glow Wire Flammability Index	642 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	642 - 960	°C	IEC 60695-2-13
Oxygen Index	21 - 35	%	ASTM D2863, ISO 4589-2

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity	143 - 258	Pa·s	ASTM D3835

Injection	Nominal Value	Unit
Drying Temperature	79.8 - 112	°C
Drying Time	2.7 - 5.0	hr
Drying Time, Maximum	6.0	hr
Dew Point	-28.9 - -28.6	°C
Suggested Max Moisture	0.020 - 0.043	%
Suggested Shot Size	55 - 60	%
Suggested Max Regrind	18	%
Rear Temperature	222 - 270	°C
Middle Temperature	229 - 275	°C
Front Temperature	238 - 277	°C
Nozzle Temperature	238 - 277	°C
Processing (Melt) Temp	248 - 276	°C
Mold Temperature	59.6 - 87.1	°C
Injection Pressure	7.93 - 100	MPa
Holding Pressure	50.0 - 75.0	MPa
Back Pressure	0.0392 - 0.662	MPa

Screw Speed	46 - 77	rpm
Clamp Tonnage	5.9 - 6.1	kN/cm^2
Cushion	4.76 - 4.88	mm
Vent Depth	0.052 - 0.057	mm

Injection instructions
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Extrusion	Nominal Value	Unit
Drying Temperature	78.8 - 120	°C
Drying Time	3.0 - 4.1	hr
Suggested Max Moisture	0.017 - 0.052	%
Cylinder Zone 1 Temp.	180 - 230	°C
Cylinder Zone 2 Temp.	208 - 233	°C
Cylinder Zone 3 Temp.	229 - 232	°C
Cylinder Zone 4 Temp.	229 - 245	°C
Cylinder Zone 5 Temp.	228 - 230	°C
Melt Temperature	257 - 260	°C
Die Temperature	225 - 250	°C

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NOTE	
1.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
2.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
3.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
4.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
5.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
6.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
7.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
8.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
9.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
10.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
11.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
12.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???

13.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
14.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
15.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
16.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
17.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
18.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
19.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
20.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
21.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
22.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???

Recommended distributors for this material

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