Product Comparison

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Technical Data

Product Description	
Bayblend® T65 XF	(PC+ABS)-Blend; Vicat/B 120 temperature = 120°C; improved flow compared with T65
Generic PC+ABS	This data represents typical values that have been calculated from all products classified as: Generic PC +ABS This information is provided for comparative purposes only.

General	Bayblend® T65 XF	Generic PC+ABS
Manufacturer / Supplier	• Covestro - Polycarbonates	• Generic
Generic Symbol	• PC+ABS	• PC+ABS
Material Status	• Commercial: Active	• Commercial: Active
Literature [1]	• Technical Datasheet (English)	--
UL Yellow Card [2]	• E41613-232987	--
Search for UL Yellow Card	• Covestro - Polycarbonates • Bayblend®	--
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Features	• Good Flow	--
RoHS Compliance	• RoHS Compliant	--
ISO Designation	• PC+ABS	--

Physical	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Density / Specific Gravity				
--	--	1.10 to 1.21	g/cm³	ASTM D792 ISO 1183
23°C	1.13	--	g/cm³	ISO 1183
--	--	1.10 to 1.19	g/cm³	ASTM D1505
Apparent (Bulk) Density	--	0.60 to 0.65	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR)				
260°C/5.0 kg	--	4.8 to 30	g/10 min	ASTM D1238
260°C/5.0 kg	--	12 to 29	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	18	8.0 to 49	cm³/10min	ISO 1133
Spiral Flow	--	39.6 to 68.6	cm	
Molding Shrinkage				
Flow	--	0.45 to 0.74	%	ASTM D955
Across Flow	--	0.54 to 0.62	%	ASTM D955
--	--	0.48 to 0.65	%	ISO 294-4
Across Flow : 260°C, 3.00 mm [4]	0.50 to 0.70	--	%	ISO 2577
Flow : 260°C, 3.00 mm [4]	0.50 to 0.70	--	%	ISO 2577

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Physical	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Water Absorption				
24 hr	--	0.096 to 0.22	%	ASTM D570
24 hr, 23°C	--	0.088 to 0.70	%	ISO 62
Saturation	--	0.10 to 0.61	%	ASTM D570
Saturation, 23°C	0.70	0.090 to 0.70	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	0.057 to 0.25	%	ISO 62
Mechanical	**Bayblend® T65 XF**	**Generic PC+ABS**	**Unit**	**Test Method**
Tensile Modulus				
--	--	1850 to 3050	MPa	ASTM D638
--	--	1620 to 3190	MPa	ISO 527-1
23°C	2350	--	MPa	ISO 527-1/1
Tensile Strength				
Yield	--	48.4 to 65.2	MPa	ASTM D638
Yield	--	35.0 to 67.1	MPa	ISO 527-2
Yield, 23°C	54.0	--	MPa	ISO 527-2/50
Break	--	39.2 to 62.3	MPa	ASTM D638
Break	--	39.2 to 58.5	MPa	ISO 527-2
Break, 23°C	47.0	--	MPa	ISO 527-2/50
--	--	39.5 to 66.2	MPa	ASTM D638
--	--	47.8 to 60.5	MPa	ISO 527-2
Tensile Elongation				
Yield	--	1.5 to 21	%	ASTM D638
Yield	--	2.5 to 7.4	%	ISO 527-2
Yield, 23°C	4.4	--	%	ISO 527-2/50
Break	--	29 to 110	%	ASTM D638
Break	--	28 to 100	%	ISO 527-2
Break, 23°C	> 50	--	%	ISO 527-2/50
Nominal Tensile Strain at Break	--	49 to 100	%	ISO 527-2
Flexural Modulus				
--	--	2010 to 2770	MPa	ASTM D790
--	--	1810 to 2700	MPa	ISO 178
23°C [5]	2350	--	MPa	ISO 178
Flexural Strength				
--	--	68.4 to 105	MPa	ASTM D790
--	--	69.0 to 102	MPa	ISO 178
23°C [5]	84.0	--	MPa	ISO 178
3.5% Strain, 23°C [5]	73.0	--	MPa	ISO 178
Yield	--	68.4 to 105	MPa	ASTM D790
Break	--	63.7 to 83.7	MPa	ASTM D790
Taber Abrasion Resistance	--	54.0 to 82.0	mg	ASTM D1044

Impact	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Charpy Notched Impact Strength				
--	--	6.5 to 63	kJ/m²	ISO 179
-30°C	36	--	kJ/m²	ISO 179/1eA
23°C	50	--	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength	--	22 to 100	kJ/m²	ISO 179
Notched Izod Impact				
--	--	48 to 710	J/m	ASTM D256
--	--	9.0 to 57	kJ/m²	ISO 180
-30°C	35	--	kJ/m²	ISO 180/A
23°C	48	--	kJ/m²	ISO 180/A
Notched Izod Impact (Area)	--	39.2 to 65.1	kJ/m²	ASTM D256
Unnotched Izod Impact				
--	--	380 to 2200	J/m	ASTM D4812
--	--	94 to 100	kJ/m²	ISO 180
-30°C	No Break	--		ISO 180
23°C	No Break	--		ISO 180
Instrumented Dart Impact				
--	--	42.8 to 65.3	J	ASTM D3763
--	--	35.0 to 105	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force	--	4260 to 5400	N	ISO 6603-2
Gardner Impact	--	35.6 to 36.3	J	ASTM D3029

Hardness	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Rockwell Hardness				
--	--	100 to 120		ASTM D785
--	--	106 to 124		ISO 2039-2
Shore Hardness	--	79 to 80		ISO 868
Ball Indentation Hardness	--	89.3 to 133	MPa	ISO 2039-1

Thermal	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	--	86.9 to 131	°C	ASTM D648
0.45 MPa, Unannealed	122	87.6 to 131	°C	ISO 75-2/B
0.45 MPa, Annealed	--	92.0 to 129	°C	ISO 75-2/B
1.8 MPa, Unannealed	--	79.9 to 116	°C	ASTM D648
1.8 MPa, Unannealed	102	78.9 to 113	°C	ISO 75-2/A
1.8 MPa, Annealed	--	94.6 to 110	°C	ISO 75-2/A
Continuous Use Temperature	--	60.0 to 100	°C	ASTM D794
Vicat Softening Temperature				
--	--	89.9 to 139	°C	ASTM D1525
--	120	--	°C	ISO 306/B120
--	118	--	°C	ISO 306/B50
--	--	92.5 to 141	°C	ISO 306

Thermal	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
CLTE				
Flow	--	7.1E-5 to 8.3E-5	cm/cm/°C	ASTM D696
Flow	--	5.3E-5 to 7.6E-5	cm/cm/°C	ASTM E831
Flow	--	5.5E-5 to 1.0E-4	cm/cm/°C	ISO 11359-2
Flow : 23 to 55°C	8.0E-5	--	cm/cm/°C	ISO 11359-2
Transverse	--	6.9E-5 to 9.1E-5	cm/cm/°C	ASTM E831
Transverse	--	5.6E-5 to 8.6E-5	cm/cm/°C	ISO 11359-2
Transverse : 23 to 55°C	8.5E-5	--	cm/cm/°C	ISO 11359-2
Thermal Conductivity				
--	--	0.20 to 0.37	W/m/K	ASTM C177
--	--	0.20	W/m/K	ISO 8302
RTI Elec	--	60.0 to 90.4	°C	UL 746B
RTI Imp	--	60.0 to 90.0	°C	UL 746B
RTI Str	--	60.0 to 90.4	°C	UL 746B

Electrical	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Surface Resistivity				
--	--	1.0E+4 to 2.5E+15	ohms	ASTM D257
--	1.0E+16	5.1E+3 to 1.3E+16	ohms	IEC 60093
Volume Resistivity				
--	--	1.0 to 1.0E+17	ohms·cm	ASTM D257
--	--	1.0E+11 to 5.0E+16	ohms·cm	IEC 60093
23°C	1.0E+16	--	ohms·cm	IEC 60093
Dielectric Strength				
--	--	8.5 to 40	kV/mm	ASTM D149
--	--	15 to 37	kV/mm	IEC 60243-1
23°C, 1.00 mm	35	--	kV/mm	IEC 60243-1
Dielectric Constant				
--	--	3.00 to 3.01		ASTM D150
--	--	2.89 to 3.10		IEC 60250
--	--	2.95		IEC 60250
23°C, 100 Hz	3.10	--		IEC 60250
23°C, 1 MHz	3.00	--		IEC 60250
Dissipation Factor				
--	--	4.9E-3 to 9.1E-3		ASTM D150
--	--	1.0E-3 to 9.6E-3		IEC 60250
23°C, 100 Hz	3.0E-3	--		IEC 60250
23°C, 1 MHz	8.5E-3	--		IEC 60250
Arc Resistance	--	119 to 123	sec	ASTM D495
Comparative Tracking Index				IEC 60112
--	--	218 to 600	V	
Solution A	250	--	V	

Flammability	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Burning Rate	--	33 to 100	mm/min	ISO 3795
Flame Rating (0.9 mm)	HB	--		UL 94
Glow Wire Flammability Index	--	642 to 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	--	694 to 960	°C	IEC 60695-2-13
Oxygen Index				
--	--	28 to 32	%	ASTM D2863
-- [6]	24	--	%	ISO 4589-2
--	--	23 to 34	%	ISO 4589-2

Fill Analysis	Bayblend® T65 XF	Generic PC+ABS	Unit	Test Method
Melt Viscosity	--	170 to 255	Pa·s	ASTM D3835
Melt Viscosity [7] (260°C)	200	--	Pa·s	ISO 11443-A

Injection	Bayblend® T65 XF	Generic PC+ABS	Unit
Drying Temperature			
--	--	79 to 110	°C
Dry Air Dryer	95 to 110	--	°C
Drying Time			
--	--	2.7 to 5.0	hr
Dry Air Dryer	4.0	--	hr
Drying Time, Maximum	--	6.0	hr
Suggested Max Moisture	< 0.020	0.020 to 0.024	%
Suggested Shot Size	30 to 70	50 to 55	%
Hopper Temperature	--	70 to 74	°C
Rear Temperature	220 to 230	218 to 266	°C
Middle Temperature	225 to 235	229 to 274	°C
Front Temperature	230 to 240	234 to 270	°C
Nozzle Temperature	255 to 265	249 to 273	°C
Processing (Melt) Temp	240 to 270	243 to 275	°C
Mold Temperature	70 to 90	59 to 86	°C
Injection Pressure	--	85.3 to 99.0	MPa
Holding Pressure	--	74.7 to 75.0	MPa
Back Pressure	5.00 to 15.0	0.138 to 10.0	MPa
Screw Speed	--	52 to 56	rpm
Vent Depth	0.025 to 0.075	0.050 to 0.057	mm

Injection Notes

Bayblend® T65 XF	Peripheral Screw Speed: 0.05 - 0.2 m/s Standard Melt Temperature: 260°C Hold Pressure (% of Injection Pressure): 50 - 75%
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Extrusion	Bayblend® T65 XF	Generic PC+ABS	Unit
Drying Temperature	--	89 to 95	°C
Drying Time	--	3.0 to 7.0	hr
Melt Temperature	--	250 to 257	°C

Extrusion Notes

Generic PC+ABS	This data represents typical values that have been calculated from all products classified as: Generic PC +ABS This information is provided for comparative purposes only.

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 150x105x3mm,, MT 80°C

[5] 2.0 mm/min

[6] Procedure A

[7] 1000s-1

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