Product Comparison

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Technical Data

Product Description	
POLYblend 85H	POLYblend 85H is a Polycarbonate + ABS (PC+ABS) product. It is available in Asia Pacific, Europe, Latin America, or North America. Primary characteristic: flame rated.
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	POLYblend 85H	Generic PC+ABS
Manufacturer / Supplier	• Polykemi AB	• Generic
Generic Symbol	• PC+ABS	• PC+ABS
Material Status	• Commercial: Active	• Commercial: Active
Search for UL Yellow Card	• Polykemi AB	--
Availability	• Asia Pacific • Europe • Latin America • North America	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Also Available In	--	• Asia Pacific • Europe • Latin America • North America

Physical	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Density / Specific Gravity				
--	--	1.11 to 1.22		ASTM D792
--	1.15	1.10 to 1.21	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	25	12 to 29	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	--	8.0 to 49	cm³/10min	ISO 1133
Spiral Flow	--	15.6 to 27.0	in	
Molding Shrinkage				
Flow	--	4.5E-3 to 7.4E-3	in/in	ASTM D955
Across Flow	--	5.4E-3 to 6.2E-3	in/in	ASTM D955
--	--	0.48 to 0.65	%	ISO 294-4
Across Flow	0.50 to 0.70	--	%	Internal Method
Flow	0.50 to 0.70	--	%	Internal Method
Water Absorption				
24 hr	--	0.096 to 0.22	%	ASTM D570
24 hr, 73°F	--	0.088 to 0.70	%	ISO 62
Saturation	--	0.10 to 0.61	%	ASTM D570
Saturation, 73°F	--	0.090 to 0.70	%	ISO 62
Equilibrium, 73°F, 50% RH	--	0.057 to 0.25	%	ISO 62

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Mechanical	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Tensile Modulus				
--	--	269000 to 443000	psi	ASTM D638
--	--	234000 to 462000	psi	ISO 527-1
Tensile Strength				
Yield	--	7020 to 9460	psi	ASTM D638
Yield	--	5080 to 9730	psi	ISO 527-2
Break	--	5690 to 9040	psi	ASTM D638
Break	9140	5690 to 8480	psi	ISO 527-2
--	--	5720 to 9600	psi	ASTM D638
--	--	6930 to 8770	psi	ISO 527-2
Tensile Elongation				
Yield	--	1.5 to 21	%	ASTM D638
Yield	8.0	2.5 to 7.4	%	ISO 527-2
Break	--	29 to 110	%	ASTM D638
Break	--	28 to 100	%	ISO 527-2
Nominal Tensile Strain at Break	--	49 to 100	%	ISO 527-2
Flexural Modulus				
--	--	292000 to 402000	psi	ASTM D790
--	--	263000 to 392000	psi	ISO 178
73°F	348000	--	psi	ISO 178
Flexural Strength				
--	--	9920 to 15200	psi	ASTM D790
--	13800	10000 to 14800	psi	ISO 178
Yield	--	9920 to 15200	psi	ASTM D790
Break	--	9240 to 12100	psi	ASTM D790
Taber Abrasion Resistance	--	54.0 to 82.0	mg	ASTM D1044

Impact	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
--	--	3.1 to 30	ft·lb/in²	
-22°F	9.0	--	ft·lb/in²	
73°F	25	--	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179
--	--	11 to 49	ft·lb/in²	
-22°F	No Break	--		
73°F	No Break	--		
Notched Izod Impact				
--	--	0.90 to 13	ft·lb/in	ASTM D256
--	--	4.3 to 27	ft·lb/in²	ISO 180
Notched Izod Impact (Area)	--	18.7 to 31.0	ft·lb/in²	ASTM D256
Unnotched Izod Impact				
--	--	7.2 to 41	ft·lb/in	ASTM D4812
--	--	45 to 48	ft·lb/in²	ISO 180

Impact	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Instrumented Dart Impact				
--	--	378 to 578	in·lb	ASTM D3763
--	--	25.8 to 77.4	ft·lb	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force	--	958 to 1210	lbf	ISO 6603-2
Gardner Impact	--	315 to 321	in·lb	ASTM D3029

Hardness	POLYblend 85H	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	--	12900 to 19300	psi	ISO 2039-1

Thermal	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Deflection Temperature Under Load				
66 psi, Unannealed	--	188 to 268	°F	ASTM D648
66 psi, Unannealed [2]	257	--	°F	ISO 75-2/B
66 psi, Unannealed	--	190 to 267	°F	ISO 75-2/B
66 psi, Annealed [2]	261	--	°F	ISO 75-2/B
66 psi, Annealed	--	198 to 264	°F	ISO 75-2/B
264 psi, Unannealed	--	176 to 241	°F	ASTM D648
264 psi, Unannealed [2]	226	--	°F	ISO 75-2/A
264 psi, Unannealed	--	174 to 235	°F	ISO 75-2/A
264 psi, Annealed [2]	235	--	°F	ISO 75-2/A
264 psi, Annealed	--	202 to 231	°F	ISO 75-2/A
Continuous Use Temperature	--	140 to 212	°F	ASTM D794
Vicat Softening Temperature				
--	--	194 to 282	°F	ASTM D1525
--	266	--	°F	ISO 306/B50
--	282	--	°F	ISO 306/A50
--	--	199 to 285	°F	ISO 306
Ball Pressure Test (257°F)	Pass	--		IEC 60335-1
CLTE				
Flow	--	4.0E-5 to 4.6E-5	in/in/°F	ASTM D696
Flow	--	3.0E-5 to 4.2E-5	in/in/°F	ASTM E831
Flow	--	3.1E-5 to 5.7E-5	in/in/°F	ISO 11359-2
Transverse	--	3.8E-5 to 5.1E-5	in/in/°F	ASTM E831
Transverse	--	3.1E-5 to 4.8E-5	in/in/°F	ISO 11359-2
Thermal Conductivity				
--	--	1.4 to 2.6	Btu·in/hr/ft²/°F	ASTM C177
--	--	1.4	Btu·in/hr/ft²/°F	ISO 8302
RTI Elec	--	140 to 195	°F	UL 746B
RTI Imp	--	140 to 194	°F	UL 746B
RTI Str	--	140 to 195	°F	UL 746B

Electrical	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Surface Resistivity				
--	--	1.0E+4 to 2.5E+15	ohms	ASTM D257
--	--	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
Dielectric Strength				
--	--	220 to 1000	V/mil	ASTM D149
--	--	380 to 940	V/mil	IEC 60243-1
Dielectric Constant				
--	--	3.00 to 3.01		ASTM D150
--	--	2.89 to 3.10		IEC 60250
--	--	2.95		IEC 60250
Dissipation Factor				
--	--	4.9E-3 to 9.1E-3		ASTM D150
--	--	1.0E-3 to 9.6E-3		IEC 60250
Arc Resistance	--	119 to 123	sec	ASTM D495
Comparative Tracking Index	--	218 to 600	V	IEC 60112

Flammability	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Burning Rate	--	1.3 to 4.1	in/min	ISO 3795
Flame Rating (0.06 in)	HB	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
--	--	1190 to 1760	°F	
0.08 in	1380	--	°F	
Glow Wire Ignition Temperature	--	1280 to 1760	°F	IEC 60695-2-13
Oxygen Index				
--	--	28 to 32	%	ASTM D2863
--	--	23 to 34	%	ISO 4589-2

Fill Analysis	POLYblend 85H	Generic PC+ABS	Unit	Test Method
Melt Viscosity	--	170 to 255	Pa·s	ASTM D3835

Injection	POLYblend 85H	Generic PC+ABS	Unit
Drying Temperature	194 to 212	174 to 231	°F
Drying Time	2.0 to 8.0	2.7 to 5.0	hr
Drying Time, Maximum	--	6.0	hr
Suggested Max Moisture	< 0.050	0.020 to 0.024	%
Suggested Shot Size	--	50 to 55	%
Hopper Temperature	--	158 to 165	°F
Rear Temperature	--	424 to 511	°F
Middle Temperature	--	444 to 525	°F
Front Temperature	--	453 to 518	°F
Nozzle Temperature	--	480 to 524	°F
Processing (Melt) Temp	500 to 554	470 to 528	°F

Injection	POLYblend 85H	Generic PC+ABS	Unit
Mold Temperature	158 to 212	139 to 187	°F
Injection Pressure	--	12400 to 14400	psi
Holding Pressure	--	10800 to 10900	psi
Back Pressure	870 to 1450	20.0 to 1450	psi
Screw Speed	--	52 to 56	rpm
Vent Depth	--	2.0E-3 to 2.3E-3	in
Peripheral Screw Speed	1.1 to 1.8	--	ft/sec

Injection 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.

Extrusion	POLYblend 85H	Generic PC+ABS	Unit
Drying Temperature	--	192 to 203	°F
Drying Time	--	3.0 to 7.0	hr
Melt Temperature	--	481 to 495	°F

Extrusion Notes	
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Notes

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

[2] 120°C/h