

## Technical Data

### Product Description

CYCOLOY™ Resin  
LG9000 - Europe

PC/ABS low gloss.

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

CYCOLOY™ Resin  
LG9000 - Europe

Generic  
PC+ABS

Manufacturer / Supplier

• SABIC

• Generic

Generic Symbol

• PC+ABS

• PC+ABS

Material Status

• Commercial: Active

• Commercial: Active

Search for UL Yellow Card

• SABIC  
• CYCOLOY™ Resin

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Availability

• Europe

• Africa & Middle East  
• Asia Pacific  
• Europe  
• Latin America  
• North America

Uses

• Appliances  
• Automotive Exterior Parts  
• Automotive Interior Parts  
• Automotive Lighting  
• Construction Applications  
• Decorative Parts  
• Electrical Parts  
• Electrical/Electronic Applications  
• Electronic Displays  
• Heavy Transportation  
• Lighting Applications  
• Medical/Healthcare Applications  
• Military/Defense Applications  
• Optical Applications  
• Recreational Vehicle Applications

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Also Available In

• Asia Pacific  
• Latin America  
• North America

• Asia Pacific  
• Europe  
• Latin America  
• North America

### Physical

CYCOLOY™ Resin  
LG9000 - Europe

Generic  
PC+ABS

Unit

Test Method

Density / Specific Gravity

--

--

1.11 to 1.22

ASTM D792

--

1.13

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

--

12 to 29

g/10 min

ISO 1133

Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)

20

8.0 to 49

cm³/10min

ISO 1133

Spiral Flow

--

15.6 to 27.0

in



Physical	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
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
Flow <sup>2</sup>	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	0.60	0.090 to 0.70	%	ISO 62
Equilibrium, 73°F, 50% RH	0.20	0.057 to 0.25	%	ISO 62
Mechanical	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Tensile Modulus				
--	--	269000 to 443000	psi	ASTM D638
--	--	234000 to 462000	psi	ISO 527-1
--	334000	--	psi	ISO 527-1/1
Tensile Strength				
Yield	--	7020 to 9460	psi	ASTM D638
Yield	--	5080 to 9730	psi	ISO 527-2
Yield	7250	--	psi	ISO 527-2/5 ISO 527-2/50
Break	--	5690 to 9040	psi	ASTM D638
Break	--	5690 to 8480	psi	ISO 527-2
Break	5800	--	psi	ISO 527-2/5
Break	6530	--	psi	ISO 527-2/50
--	--	5720 to 9600	psi	ASTM D638
--	--	6930 to 8770	psi	ISO 527-2
Tensile Elongation				
Yield	--	1.5 to 21	%	ASTM D638
Yield	--	2.5 to 7.4	%	ISO 527-2
Yield	4.0	--	%	ISO 527-2/5 ISO 527-2/50
Break	--	29 to 110	%	ASTM D638
Break	--	28 to 100	%	ISO 527-2
Break	10	--	%	ISO 527-2/5 ISO 527-2/50
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
-- <sup>3</sup>	348000	--	psi	ISO 178



Mechanical	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Flexural Strength				
--	--	9920 to 15200	psi	ASTM D790
--	--	10000 to 14800	psi	ISO 178
--, 3, 4	11700	--	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
1000 Cycles, 1000 g, CS-17 Wheel	82.0	--	mg	Internal Method
Impact	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Charpy Notched Impact Strength				
--	--	3.1 to 30	ft·lb/in <sup>2</sup>	ISO 179
-22°F <sup>5</sup>	9.5	--	ft·lb/in <sup>2</sup>	ISO 179/1eA
73°F <sup>5</sup>	21	--	ft·lb/in <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength	--	11 to 49	ft·lb/in <sup>2</sup>	ISO 179
Notched Izod Impact				
--	--	0.90 to 13	ft·lb/in	ASTM D256
--	--	4.3 to 27	ft·lb/in <sup>2</sup>	ISO 180
-22°F <sup>6</sup>	9.5	--	ft·lb/in <sup>2</sup>	ISO 180/1A
73°F <sup>6</sup>	21	--	ft·lb/in <sup>2</sup>	ISO 180/1A
Notched Izod Impact (Area)	--	18.7 to 31.0	ft·lb/in <sup>2</sup>	ASTM D256
Unnotched Izod Impact				
--	--	7.2 to 41	ft·lb/in	ASTM D4812
--	--	45 to 48	ft·lb/in <sup>2</sup>	ISO 180
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	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Rockwell Hardness				
--	--	100 to 120		ASTM D785
--	--	106 to 124		ISO 2039-2
R-Scale	116	--		ISO 2039-2
Shore Hardness	--	79 to 80		ISO 868
Ball Indentation Hardness				ISO 2039-1
--	--	12900 to 19300	psi	
H 358/30	13500	--	psi	



Thermal	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Deflection Temperature Under Load				
66 psi, Unannealed	--	188 to 268	°F	ASTM D648
66 psi, Unannealed	--	190 to 267	°F	ISO 75-2/B
66 psi, Unannealed, 0.157 in, 3.94 in Span <sup>7</sup>	248	--	°F	ISO 75-2/Be
66 psi, Annealed	--	198 to 264	°F	ISO 75-2/B
264 psi, Unannealed	--	176 to 241	°F	ASTM D648
264 psi, Unannealed	--	174 to 235	°F	ISO 75-2/A
264 psi, Unannealed, 0.157 in, 3.94 in Span <sup>7</sup>	207	--	°F	ISO 75-2/Ae
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
--	255	--	°F	ISO 306/B120
--	252	--	°F	ISO 306/B50
--	--	199 to 285	°F	ISO 306
Ball Pressure Test				IEC 60695-10-2
163 to 171°F	Pass	--		
230°F <sup>8</sup>	Pass	--		
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
Flow : -40 to 104°F	4.4E-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
Transverse : -40 to 104°F	4.4E-5	--	in/in/°F	ISO 11359-2
Thermal Conductivity				
--	--	1.4 to 2.6	Btu·in/hr/ft²/°F	ASTM C177
--	1.4	1.4	Btu·in/hr/ft²/°F	ISO 8302
RTI Elec	140	140 to 195	°F	UL 746B
RTI Imp	140	140 to 194	°F	UL 746B
RTI Str	140	140 to 195	°F	UL 746B
Electrical	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Surface Resistivity				
--	--	1.0E+4 to 2.5E+15	ohms	ASTM D257
--	> 1.0E+15	5.1E+3 to 1.3E+16	ohms	IEC 60093
Volume Resistivity				
--	--	1.0 to 1.0E+17	ohms·cm	ASTM D257
--	> 1.0E+15	1.0E+11 to 5.0E+16	ohms·cm	IEC 60093



Electrical	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Dielectric Strength				
--	--	220 to 1000	V/mil	ASTM D149
--	--	380 to 940	V/mil	IEC 60243-1
0.0315 in, in Oil	890	--	V/mil	IEC 60243-1
0.0630 in, in Oil	640	--	V/mil	IEC 60243-1
0.126 in, in Oil	430	--	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
50 Hz	2.60	--		IEC 60250
60 Hz	2.60	--		IEC 60250
1 MHz	2.60	--		IEC 60250
Dissipation Factor				
--	--	4.9E-3 to 9.1E-3		ASTM D150
--	--	1.0E-3 to 9.6E-3		IEC 60250
50 Hz	1.0E-3	--		IEC 60250
60 Hz	1.0E-3	--		IEC 60250
1 MHz	9.0E-3	--		IEC 60250
Arc Resistance	--	119 to 123	sec	ASTM D495
Comparative Tracking Index (CTI)	PLC 2	--		UL 746A
Comparative Tracking Index	275	218 to 600	V	IEC 60112
High Amp Arc Ignition (HAI) <sup>9</sup>	PLC 0	--		UL 746A
Hot-wire Ignition (HWI)	PLC 2	--		UL 746A
Flammability	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Burning Rate	--	1.3 to 4.1	in/min	ISO 3795
Flame Rating				UL 94
0.04 in	HB	--		
0.12 in	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
--	--	1190 to 1760	°F	
0.13 in	1200	--	°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
FMVSS Burning Speed (39.4 mil)	1	--	in/min	FMVSS 302
Fill Analysis	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	Test Method
Melt Viscosity	--	170 to 255	Pa·s	ASTM D3835
Injection	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit	
Drying Temperature	203 to 221	174 to 231	°F	
Drying Time	2.0 to 4.0	2.7 to 5.0	hr	



Injection	CYCOLOY™ Resin LG9000 - Europe	Generic PC+ABS	Unit
Drying Time, Maximum	--	6.0	hr
Suggested Max Moisture	0.020	0.020 to 0.024	%
Suggested Shot Size	--	50 to 55	%
Hopper Temperature	140 to 176	158 to 165	°F
Rear Temperature	482 to 554	424 to 511	°F
Middle Temperature	491 to 563	444 to 525	°F
Front Temperature	500 to 572	453 to 518	°F
Nozzle Temperature	527 to 572	480 to 524	°F
Processing (Melt) Temp	527 to 572	470 to 528	°F
Mold Temperature	140 to 194	139 to 187	°F
Injection Pressure	--	12400 to 14400	psi
Holding Pressure	--	10800 to 10900	psi
Back Pressure	--	20.0 to 1450	psi
Screw Speed	--	52 to 56	rpm
Vent Depth	--	2.0E-3 to 2.3E-3	in

## Injection Notes

Generic  
PC+ABS

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Extrusion	CYCOLOY™ Resin LG9000 - Europe	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

Generic  
PC+ABS

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## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.<sup>2</sup> Tensile Bar<sup>3</sup> 0.079 in/min<sup>4</sup> at Yield<sup>5</sup> 80\*10\*3 sp=62mm<sup>6</sup> 80\*10\*3 mm<sup>7</sup> 120\*10\*4 mm<sup>8</sup> Approximate Maximum<sup>9</sup> Surface