

Technical Data

Product Description

CYCOLOY™ Resin
CM8622 - Europe

CYCOLOY CM8622 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable high heat grade offering high modulus, low CTE, good practical impact and aesthetics.

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
CM8622 - 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

- Automotive Applications
- Automotive Exterior Parts
- Automotive Interior Parts
- Glazing

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Also Available In

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- Asia Pacific
- Europe
- Latin America
- North America

Physical

CYCOLOY™ Resin
CM8622 - Europe

Generic
PC+ABS

Unit

Test Method

Density / Specific Gravity

--

1.25

1.11 to 1.22

ASTM D792

--

1.26

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

16

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)

15

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 ²

0.40 to 0.60

--

%

Internal Method

Flow ²

0.50 to 0.70

--

%

Internal Method

Across Flow : 0.126 in

0.30 to 0.50 in

--

%

Internal Method

Flow : 0.126 in

0.40 to 0.60

--

%

Internal Method



Physical	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test 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	0.20	0.090 to 0.70	%	ISO 62
Equilibrium, 73°F, 50% RH	0.050	0.057 to 0.25	%	ISO 62
Mechanical	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Tensile Modulus				
--	--	269000 to 443000	psi	ASTM D638
-- ³	522000	--	psi	ASTM D638
--	--	234000 to 462000	psi	ISO 527-1
--	522000	--	psi	ISO 527-1/1
Tensile Strength				
Yield ⁴	6820	--	psi	ASTM D638
Yield	--	7020 to 9460	psi	ASTM D638
Yield	--	5080 to 9730	psi	ISO 527-2
Yield	7250	--	psi	ISO 527-2/5
Break	--	5690 to 9040	psi	ASTM D638
Break ⁴	8700	--	psi	ASTM D638
Break	--	5690 to 8480	psi	ISO 527-2
Break	7830	--	psi	ISO 527-2/5
--	--	5720 to 9600	psi	ASTM D638
--	--	6930 to 8770	psi	ISO 527-2
Tensile Elongation				
Yield	--	1.5 to 21	%	ASTM D638
Yield ⁴	3.4	--	%	ASTM D638
Yield	--	2.5 to 7.4	%	ISO 527-2
Yield	3.5	--	%	ISO 527-2/5
Break	--	29 to 110	%	ASTM D638
Break ⁴	55	--	%	ASTM D638
Break	--	28 to 100	%	ISO 527-2
Break	50	--	%	ISO 527-2/5
Nominal Tensile Strain at Break				
	--	49 to 100	%	ISO 527-2
Flexural Modulus				
1.97 in Span ⁵	529000	--	psi	ASTM D790
--	--	292000 to 402000	psi	ASTM D790
--	--	263000 to 392000	psi	ISO 178
-- ⁶	522000	--	psi	ISO 178



Mechanical	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Flexural Strength				
--	--	9920 to 15200	psi	ASTM D790
--	--	10000 to 14800	psi	ISO 178
-- ^{6,7}	13100	--	psi	ISO 178
Yield	--	9920 to 15200	psi	ASTM D790
Yield, 1.97 in Span ⁵	13100	--	psi	ASTM D790
Break	--	9240 to 12100	psi	ASTM D790
Taber Abrasion Resistance	--	54.0 to 82.0	mg	ASTM D1044
Impact	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Charpy Notched Impact Strength				
--	--	3.1 to 30	ft·lb/in ²	ISO 179
-22°F ⁸	3.8	--	ft·lb/in ²	ISO 179/1eA ISO 179/2C
73°F ⁸	5.7	--	ft·lb/in ²	ISO 179/1eA ISO 179/2C
Charpy Unnotched Impact Strength				
--	--	11 to 49	ft·lb/in ²	ISO 179
-22°F ⁸	48	--	ft·lb/in ²	ISO 179/1eU ISO 179/2U
73°F ⁸	50	--	ft·lb/in ²	ISO 179/1eU ISO 179/2U
Notched Izod Impact				
--	--	0.90 to 13	ft·lb/in	ASTM D256
-22°F	1.7	--	ft·lb/in	ASTM D256
73°F	4.7	--	ft·lb/in	ASTM D256
--	--	4.3 to 27	ft·lb/in ²	ISO 180
-22°F ⁹	3.8	--	ft·lb/in ²	ISO 180/1A
73°F ⁹	6.2	--	ft·lb/in ²	ISO 180/1A
Notched Izod Impact (Area)	--	18.7 to 31.0	ft·lb/in ²	ASTM D256
Unnotched Izod Impact				
--	--	7.2 to 41	ft·lb/in	ASTM D4812
-22°F	27	--	ft·lb/in	ASTM D4812
73°F	31	--	ft·lb/in	ASTM D4812
--	--	45 to 48	ft·lb/in ²	ISO 180
-22°F ⁹	64	--	ft·lb/in ²	ISO 180/1U
73°F ⁹	67	--	ft·lb/in ²	ISO 180/1U
Instrumented Dart Impact				
--	--	378 to 578	in·lb	ASTM D3763
73°F, Total Energy	443	--	in·lb	ASTM D3763
--	62.7	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 CM8622 - Europe	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	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Deflection Temperature Under Load				
66 psi, Unannealed	--	188 to 268	°F	ASTM D648
66 psi, Unannealed, 0.126 in	264	--	°F	ASTM D648
66 psi, Unannealed	--	190 to 267	°F	ISO 75-2/B
66 psi, Unannealed, 0.157 in, 2.52 in Span ⁹	264	--	°F	ISO 75-2/Bf
66 psi, Annealed	--	198 to 264	°F	ISO 75-2/B
264 psi, Unannealed	--	176 to 241	°F	ASTM D648
264 psi, Unannealed, 0.126 in	234	--	°F	ASTM D648
264 psi, Unannealed	--	174 to 235	°F	ISO 75-2/A
264 psi, Unannealed, 0.157 in, 2.52 in Span ⁹	234	--	°F	ISO 75-2/Af
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
--	273	--	°F	ISO 306/B120
--	271	--	°F	ISO 306/B50
--	291	--	°F	ISO 306/A50
--	--	199 to 285	°F	ISO 306
Ball Pressure Test (253 to 261°F)				
	Pass	--		IEC 60695-10-2
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	2.8E-5	--	in/in/°F	ISO 11359-2
Flow : -22 to 176°F	3.1E-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	3.6E-5	--	in/in/°F	ISO 11359-2
Transverse : -22 to 176°F	3.9E-5	--	in/in/°F	ISO 11359-2
Thermal Conductivity				
--	--	1.4 to 2.6	Btu·in/hr/ft ² /°F	ASTM C177
--	--	1.4	Btu·in/hr/ft ² /°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	CYCOLOY™ Resin CM8622 - Europe	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	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Burning Rate	--	1.3 to 4.1	in/min	ISO 3795
Glow Wire Flammability Index	--	1190 to 1760	°F	IEC 60695-2-12
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	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	Test Method
Melt Viscosity	--	170 to 255	Pa-s	ASTM D3835
Injection	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit	
Drying Temperature	230 to 248	174 to 231	°F	
Drying Time	2.0 to 6.0	2.7 to 5.0	hr	
Drying Time, Maximum	--	6.0	hr	
Suggested Max Moisture	0.020	0.020 to 0.024	%	
Suggested Shot Size	30 to 80	50 to 55	%	
Hopper Temperature	--	158 to 165	°F	
Rear Temperature	500 to 518	424 to 511	°F	
Middle Temperature	509 to 554	444 to 525	°F	
Front Temperature	518 to 572	453 to 518	°F	
Nozzle Temperature	500 to 554	480 to 524	°F	
Processing (Melt) Temp	518 to 572	470 to 528	°F	
Mold Temperature	140 to 212	139 to 187	°F	
Injection Pressure	--	12400 to 14400	psi	
Holding Pressure	--	10800 to 10900	psi	



Injection	CYCOLOY™ Resin CM8622 - Europe	Generic PC+ABS	Unit
Back Pressure	43.5 to 102	20.0 to 1450	psi
Screw Speed	40 to 70	52 to 56	rpm
Vent Depth	1.5E-3 to 3.0E-3	2.0E-3 to 2.3E-3	in

Injection Notes

Generic
PC+ABS

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Extrusion	CYCOLOY™ Resin CM8622 - 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

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

² Tensile Bar

³ 0.20 in/min

⁴ Type I, 0.20 in/min

⁵ 0.051 in/min

⁶ 0.079 in/min

⁷ at Yield

⁸ 80*10*4 sp=62mm

⁹ 80*10*4 mm

