

Makrolon® 2558

聚碳酸酯

Covestro - Polycarbonates

Technical Data

Product Description

MVR (300°C/1.2 kg) 14 cm³/10 min; medical devices; suitable for ETO and steam sterilization at 121°C; biocompatible according to many ISO 10993-1 test requirements; medium viscosity; easy release; injection molding - melt temperature 280 - 320°C; available in transparent and opaque colors

General

Features	<ul style="list-style-type: none"> 环氧乙烷消毒 生物兼容性 	<ul style="list-style-type: none"> 脱模性能良好 用蒸汽消毒 	<ul style="list-style-type: none"> 中等粘性
Uses	<ul style="list-style-type: none"> 医疗/护理用品 	<ul style="list-style-type: none"> 医疗器械 	
Agency Ratings	<ul style="list-style-type: none"> ISO 10993-第一部分 		
RoHS Compliance	<ul style="list-style-type: none"> RoHS 合规 		
Automotive Specifications	<ul style="list-style-type: none"> GM GMW15702-140015 		
Appearance	<ul style="list-style-type: none"> 不透明 	<ul style="list-style-type: none"> 可用颜色 	<ul style="list-style-type: none"> 清晰/透明
Processing Method	<ul style="list-style-type: none"> 注射成型 		

Physical

	额定值 单位制	测试方法
Density (23°C)	1.20 g/cm ³	ISO 1183
Apparent (Bulk) Density ⁴	0.66 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	16 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	14 cm ³ /10min	ISO 1133
Molding Shrinkage		
垂直	0.60 到 0.80 %	ISO 2577
流动	0.60 到 0.80 %	ISO 2577
垂直 : 280°C, 2.00 mm ⁵	0.70 %	ISO 294-4
流动 : 2.00 mm ⁵	0.65 %	ISO 294-4
Water Absorption		ISO 62
饱和, 23°C	0.30 %	
平衡, 23°C, 50% RH	0.12 %	

Mechanical

	额定值 单位制	测试方法
Tensile Modulus (23°C)	2400 MPa	ISO 527-2/1
Tensile Stress		ISO 527-2/50
屈服, 23°C	66.0 MPa	
断裂, 23°C	70.0 MPa	
Tensile Strain		ISO 527-2/50
屈服, 23°C	6.1 %	
断裂, 23°C	130 %	
Nominal Tensile Strain at Break (23°C)	> 50 %	ISO 527-2/50
Tensile Creep Modulus		ISO 899-1
1 hr	2200 MPa	
1000 hr	1900 MPa	
Flexural Modulus ⁶ (23°C)	2400 MPa	ISO 178

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Mechanical	额定值 单位制	测试方法
Flexural Stress ⁶		ISO 178
23°C	97.0 MPa	
3.5% Strain, 23°C	73.0 MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	7.1 %	ISO 178
Impact	额定值 单位制	测试方法
Charpy Notched Impact Strength ⁸		ISO 179/1eA
-30°C, 完全断裂	16 kJ/m ²	
23°C, 局部断裂	70 kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-60°C	无断裂	
-30°C	无断裂	
23°C	无断裂	
Notched Izod Impact Strength ⁸		ISO 180/A
-30°C, 完全断裂	15 kJ/m ²	
23°C, 局部断裂	65 kJ/m ²	
Multi-Axial Instrumented Impact Energy		ISO 6603-2
-30°C	65.0 J	
23°C	60.0 J	
Multi-Axial Instrumented Impact Peak Force		ISO 6603-2
-30°C	6300 N	
23°C	5400 N	
Hardness	额定值 单位制	测试方法
Ball Indentation Hardness	115 MPa	ISO 2039-1
Thermal	额定值 单位制	测试方法
Heat Deflection Temperature		
0.45 MPa, 未退火	136 °C	ISO 75-2/B
1.8 MPa, 未退火	124 °C	ISO 75-2/A
Glass Transition Temperature ⁹	144 °C	ISO 11357-2
Vicat Softening Temperature		
--	145 °C	ISO 306/B120
--	144 °C	ISO 306/B50
Ball Pressure Test (138°C)	通过	IEC 60695-10-2
CLTE		ISO 11359-2
流动 : 23 到 55°C	6.5E-5 cm/cm/°C	
垂直 : 23 到 55°C	6.5E-5 cm/cm/°C	
Thermal Conductivity ¹⁰ (23°C)	0.20 W/m/K	ISO 8302
Electrical	额定值 单位制	测试方法
Surface Resistivity	1.0E+16 ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16 ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	34 kV/mm	IEC 60243-1
Relative Permittivity		IEC 60250
23°C, 100 Hz	3.10	
23°C, 1 MHz	3.00	
Dissipation Factor		IEC 60250
23°C, 100 Hz	5.0E-4	
23°C, 1 MHz	9.0E-3	
Comparative Tracking Index (解决方案 A)	250 V	IEC 60112
Flammability	额定值 单位制	测试方法
Oxygen Index ¹¹	28 %	ISO 4589-2
Flash Ignition Temperature	480 °C	ASTM D1929
Self Ignition Temperature	550 °C	ASTM D1929

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Optical	额定值 单位制	测试方法
Refractive Index ¹²	1.586	ISO 489
Transmittance		ISO 13468-2
1000 µm	89.0 %	
2000 µm	89.0 %	
3000 µm	88.0 %	
4000 µm	87.0 %	
Haze (3000 µm)	< 0.800 %	ISO 14782

Additional Information	额定值 单位制
ISO Shortname	ISO 7391-PC,MR,(,)-18-9

Injection	额定值 单位制
Drying Temperature - Dry Air Dryer	120 °C
Drying Time - Dry Air Dryer	4.0 hr
Suggested Max Moisture	< 0.020 %
Suggested Shot Size	30 到 70 %
Rear Temperature	250 到 270 °C
Middle Temperature	270 到 290 °C
Front Temperature	285 到 305 °C
Nozzle Temperature	270 到 305 °C
Processing (Melt) Temp	280 到 320 °C
Mold Temperature	70 到 110 °C
Back Pressure	10.0 到 20.0 MPa
Vent Depth	0.025 到 0.075 mm

Injection Notes
 Hold Pressure (% of Injection Pressure): 50 - 75%
 Standard Melt Temperature: 300°C
 Peripheral Screw Speed: 0.05 - 0.2 m/s