

MAGNUM™ 3904

ABS Resin

Trinseo

Message:

MAGNUM® 3904 is a resin with super-high impact. It is used in a wide range of technical applications. It can be processed by injection moulding, extrusion or thermoforming. The mass (continuous process) ABS technology ensures an ABS resin that combines excellent processability with a stable light base colour that is ideal for self-colouring.

Applications:

- Transportation
- Protective covers
- Leisure
- Automotive interior trim
- Luggage

General Information		
UL YellowCard	E162447-238269	E73656-249577
Features	Good Processability	
	High Impact Resistance	
Uses	Automotive Applications	
	Automotive Interior Parts	
Forms	Pellets	
Processing Method	Extrusion	
	Injection Molding	
	Profile Extrusion	
	Sheet Extrusion	
	Thermoforming	

Physical	Nominal Value	Unit	Test Method
Density			
--	1.05	g/cm³	ISO 1183/B
--	1050	kg/m³	ISO 1183 ¹
Apparent Density	0.65	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	4.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)			
220°C/10.0 kg	4.70	cm³/10min	ISO 1133
220°C/10.0 kg	4.00	cm³/10min	ISO 1133 ²
Molding Shrinkage - Flow	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
3.20 mm, Injection Molded	1820	MPa	ISO 527-2

--	1900	MPa	ISO 527-2 ³
Tensile Stress			
Yield, 3.20 mm, Injection Molded	37.0	MPa	ISO 527-2/50
Yield, 3.20 mm, Injection Molded	39.0	MPa	ISO 527-2/100
Yield	35.0	MPa	ISO 527-2 ⁴
Tensile Strain			
Yield, 3.20 mm, Injection Molded	2.6	%	ISO 527-2/50
Yield, 3.20 mm, Injection Molded	2.8	%	ISO 527-2/100
Yield	2.5	%	ISO 527-2 ⁵
Nominal strain at break	45	%	ISO 527-2 ⁶
Flexural Modulus (3.20 mm, Injection Molded)	1900	MPa	ISO 178
Flexural Stress (3.20 mm, Injection Molded)	58.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C, Injection Molded	12	kJ/m ²	ISO 179/2C
-30°C, Injection Molded	18	kJ/m ²	ISO 179/1eA
23°C, Injection Molded	37	kJ/m ²	ISO 179/1eA
23°C, Injection Molded	22	kJ/m ²	ISO 179/2C
-30°C	16.0	kJ/m ²	ISO 179/1eA ⁷
23°C	38.0	kJ/m ²	ISO 179/1eA ⁸
Charpy impact strength			ISO 179/1eU ⁹
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/A
-30°C, Injection Molded	17	kJ/m ²	
23°C, Injection Molded	42	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Annealed	97.0	°C	ISO 75-2/A
1.8 MPa	97.0	°C	ISO 75-2 ¹⁰
Vicat Softening Temperature			
--	97.0	°C	ISO 306/B50
50°C/h, B (50N)	97.0	°C	ISO 306 ¹¹
Electrical	Nominal Value	Unit	Test Method
Volume resistivity	> 1.0E+13	ohms · m	IEC 60093 ¹²
Flammability	Nominal Value	Unit	Test Method
Burning Rate ¹³ (2.00 mm)	40	mm/min	ISO 3795
Flame Rating ¹⁴			UL 94
1.50 mm	HB		
3.00 mm	HB		
Burning Behav. at 1.6mm nom. thickn. (1.50 mm, UL)	HB		ISO 1210 ¹⁵

Carbon Emission ¹⁶	20.0	µg/g	VDA 277
NOTE			
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
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4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
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10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
13.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
16.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		

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