

MAGNUM™ 3513

ABS Resin

Trinseo

Message:

MAGNUM* 3513 is a grade which combines high impact with good flowability. It is suitable for injection moulding and extrusion applications. 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:

- Extruded sheet
- Profiles
- General injection moulding

General Information			
UL YellowCard	E162447-238266	E73656-249574	
Features	Good Flow		
	Good Processability		
	High Impact Resistance		
Uses	Sheet		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
	Profile Extrusion		
	Sheet Extrusion		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Density			
--	1.05	g/cm ³	ISO 1183/B
--	1050	kg/m ³	ISO 1183 ¹
Apparent Density	0.65	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	8.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)			
220°C/10.0 kg	8.60	cm ³ /10min	ISO 1133
220°C/10.0 kg	8.00	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.40 to 0.70	%	ISO 294-4
Water Absorption			ISO 62 ³
Saturation	0.70	%	
Equilibrium	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			

3.20 mm, Injection Molded	2360	MPa	ISO 527-2
--	2600	MPa	ISO 527-2 ⁴
Tensile Stress			
Yield, 3.20 mm, Injection Molded	46.0	MPa	ISO 527-2/50
Yield	47.0	MPa	ISO 527-2 ⁵
Tensile Strain			
Yield, 3.20 mm, Injection Molded	2.3	%	ISO 527-2/50
Yield	2.4	%	ISO 527-2 ⁶
Nominal strain at break	40	%	ISO 527-2 ⁷
Flexural Modulus (3.20 mm, Injection Molded)	2200	MPa	ISO 178
Flexural Stress (3.20 mm, Injection Molded)	70.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C, Injection Molded	8.0	kJ/m ²	ISO 179/2C
-30°C, Injection Molded	11	kJ/m ²	ISO 179/1eA
23°C, Injection Molded	24	kJ/m ²	ISO 179/1eA
23°C, Injection Molded	15	kJ/m ²	ISO 179/2C
-30°C	11.0	kJ/m ²	ISO 179/1eA ⁸
23°C	22.0	kJ/m ²	ISO 179/1eA ⁹
Charpy impact strength			ISO 179/1eU ¹⁰
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/A
-30°C, Injection Molded	11	kJ/m ²	
23°C, Injection Molded	23	kJ/m ²	
Tensile notched impact strength (23°C)	72.0	kJ/m ²	ISO 8256/1 ¹¹
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa	103	°C	ISO 75-2 ¹²
1.8 MPa, Annealed	100	°C	ISO 75-2/A
1.8 MPa	100	°C	ISO 75-2 ¹³
Vicat Softening Temperature			
--	101	°C	ISO 306/B50
50°C/h, B (50N)	99.0	°C	ISO 306 ¹⁴
CLTE			ISO 11359-2 ¹⁵
Flow	8.0E-5	cm/cm/°C	
Transverse	6.0E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Volume resistivity	> 1.0E+13	ohms · m	IEC 60093 ¹⁶
Relative Permittivity			IEC 60250 ¹⁷
100 Hz	2.80		

1 MHz	2.70		
Dissipation Factor			IEC 60250 ¹⁸
100 Hz	6.0E-3		
1 MHz	8.0E-3		
Flammability	Nominal Value	Unit	Test Method
Burning Rate ¹⁹ (2.00 mm)	45	mm/min	ISO 3795
Flame Rating ²⁰			UL 94
1.50 mm	HB		
3.00 mm	HB		
Burning Behav. at 1.6mm nom. thickn. (1.50 mm, UL)	HB		ISO 1210 ²¹
NOTE			
1.	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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14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
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21.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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