

MALECCA K-510

Acrylonitrile Butadiene Styrene

Denka Company Limited

Message:

MALECCA is a high heat resistant ABS resin which is based on styrene-N-phenylmaleimide copolymer. MALECCA was developed by Denka using their advanced polymerization technologies. This high heat ABS is much more highly improved in the areas of heat stability, processing characteristics and impact strength over traditional alpha-methylstyrene-based resins and is very easy to use.

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.08	g/cm ³	ASTM D792
23°C	1.08	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (265°C/10.0 kg)	20	g/10 min	ISO 1133
Molding Shrinkage (2.00 mm)	0.60 to 0.90	%	Internal Method
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
R-Scale	114		ASTM D785
R-Scale	112		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	40.0	MPa	ASTM D638
--	2100	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	41.0	MPa	
Break	38.0	MPa	
Nominal Tensile Strain at Break	21	%	ISO 527-2/50
Flexural Modulus			
-- ²	2050	MPa	ASTM D790
-- ³	2100	MPa	ISO 178
Flexural Strength			
-- ⁴	71.0	MPa	ASTM D790
-- ⁵	70.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	12	kJ/m ²	ISO 179
Notched Izod Impact	160	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed ⁶	118	°C	ASTM D648

1.8 MPa, Unannealed	107	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	129	°C	ASTM D1525 ⁷
--	131	°C	ISO 306/B
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100 to 110	°C	
Drying Time	3.0 to 4.0	hr	
Rear Temperature	220 to 240	°C	
Middle Temperature	230 to 260	°C	
Front Temperature	240 to 270	°C	
Nozzle Temperature	240 to 265	°C	
Mold Temperature	50.0 to 80.0	°C	
Back Pressure	0.490 to 0.981	MPa	
Screw Speed	50 to 80	rpm	
NOTE			
1.	5.0 mm/min		
2.	15 mm/min		
3.	2.0 mm/min		
4.	15 mm/min		
5.	2.0 mm/min		
6.	Edgewise		
7.	Loading 2 (50 N)		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

