

# ALPHALAC SF-510

## High Impact Polystyrene

### LG Chem Ltd.

Product Description			
Alphalac of LG chemical is high functionality styrene resin and offers excellent properties and processibility .This product can be accepted as the replacement of general ABS resins.			
General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• North America	• South America
Features	• Good Processability	• High Flow	• High Impact Resistance
Forms	• Pellets		
Processing Method	• Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	12	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.80	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus <sup>2</sup>	1670	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Yield)	24.5	MPa	ASTM D638
Tensile Elongation <sup>2</sup>			ASTM D638
Yield	5.0	%	
Break	60	%	
Flexural Modulus <sup>3</sup>	2240	MPa	ASTM D790
Flexural Strength <sup>2</sup> (Yield)	39.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C, 3.18 mm	49.0	J/m	
-30°C, 6.35 mm	39.2	J/m	
23°C, 3.18 mm	127	J/m	
23°C, 6.35 mm	98.1	J/m	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.35 mm	85.0	°C	
0.45 MPa, Annealed, 6.35 mm	90.0	°C	
1.8 MPa, Unannealed, 6.35 mm	80.0	°C	
1.8 MPa, Annealed, 6.35 mm	90.0	°C	
Vicat Softening Temperature			
--	99.0	°C	ASTM D1525 <sup>4</sup>
--	86.0	°C	ASTM D1525 <sup>5</sup>
Electrical	Nominal Value	Unit	Test Method
Arc Resistance (PLC)	PLC 6		ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL			UL 94
1.59 mm	HB		
3.18 mm	HB		
UL 746	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI) (PLC)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR) (PLC)			UL 746
--	PLC 0		
Hot-wire Ignition (HWI) (PLC)	PLC 3		UL 746
Additional Information			
Flammability, IEC 707, 1/8 in, mm/min: FH3-28			

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

如需要更多物性资料请查阅 [www.kedisujiao.com](http://www.kedisujiao.com)

备注：以上原料物性数据由IDES发布,我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！

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Injection	Nominal Value	Unit
Drying Temperature	70.0 to 80.0	°C
Drying Time	1.0 to 2.0	hr
Rear Temperature	190 to 210	°C
Middle Temperature	205 to 220	°C
Front Temperature	215 to 230	°C
Nozzle Temperature	205 to 230	°C
Processing (Melt) Temp	215 to 230	°C
Mold Temperature	40.0 to 70.0	°C
Injection Pressure	60.0 to 100	MPa
Holding Pressure	50.0 to 80.0	MPa
Back Pressure	10.0 to 30.0	MPa
Screw Speed	50 to 100	rpm

**Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 50 mm/min

<sup>3</sup> 15 mm/min

<sup>4</sup> Loading 1 (10 N)

<sup>5</sup> Loading 2 (50 N)

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