
ELIX ABS 118HF

Very high flow ABS, high gloss surface with antistatic additive

Product properties

Very high flow ABS material.
Excellent balance of impact strength and flowability.
High gloss surface finish.
Used as base resin for improved flowability
Housing big parts.
Thin-walled parts.

Chemical composition

Acrylonitrile-Butadiene-Styrene Copolymer.

Physical form

Pellets.

Handling information

Please see the Material Safety Data Sheet for relevant health & safety information.

Typical properties

Property	Test Condition	Standard	Unit Value		Unit Value	
			SI Metrics		US Conventional	
Rheological properties						
Melt volume-flow rate	220°C, 10kg	ISO 1133	cm ³ /10min	57		
Melt flow rate	230°C, 3.8kg	ASTM D1238			g/10min	15
Molding shrinkage, parallel	60x60x2 mm	ISO 294-4	%	0.5-0.7		
Molding shrinkage, normal	60x60x2 mm	ISO 294-4	%	0.5-0.7		
Mechanical properties (23°C /50% H.R.)						
Yield stress	50 mm/min	ISO 527-1,2	MPa	42		
	5 mm/min	ASTM D 638	MPa	39	psi	5650
Elongation at break	50 mm/min	acc. ISO 527-1,2	%	34		
	5 mm/min	ASTM D 638			%	34
Tensile modulus	1 mm/min	ISO 527-1,2	MPa	2260		
	5 mm/min	ASTM D 638			psi	328000
Flexural modulus	2 mm/min	ISO 178	MPa	2350		
	1.3 mm/min	ASTM D 790			psi	341000
Flexural strength	2 mm/min	ISO 178	MPa	66	psi	9500
Izod notched impact strength	23 °C (73°F)	ISO 180-1A	kJ/m ²	14	ft-lb/in ²	6.7
	-30 °C (-22°F)	ISO 180-1A	kJ/m ²	7	ft-lb/in ²	3.3
	73°F (23°C)	ASTM D 256 (3.2mm) 1/8"	J/m	180	ft-lb/in	3.4
	73°F (23°C)	ASTM D 256 (6.4mm) 1/4"	J/m	135	ft-lb/in	2.5
	-22°F (-30°C)	ASTM D 256 (3.2mm) 1/8"	J/m	95	ft-lb/in	1.8
Ball indentation hardness		ISO 2039-1	N/mm ²	92		
Thermal properties						
Vicat softening temperature	B50; 50°C/h	ISO 306	°C	98		
	50N; 50°C/h	ASTM D 1525			°F	208
Deflection temperature under load*	1.80 MPa	ISO 75-1,2	°C	94	°F	201
Deflection temperature under load*	0.45 MPa	ISO 75-1,2	°C	98	°F	208
CLTE, parallel	23 to 55°C	ISO 11359 -1,2	10 ⁻⁴ /K	0.9		
Burning behavior UL 94	1.6 mm	UL 94	Class	HB		
Burning rate (US-FMVSS)	200x105x2mm	ISO 3795	mm/min	<60	in/min	<2.3
Other properties (23°C)						
Density	25°C	ISO 1183-1	g/cm ³	1.03	lb/in ³	0.0372
Processing conditions for test specimens						
Injection molding-melt temperature		ISO 294	°C	240	°F	464
Injection molding-mold temperature		ISO 294	°C	70	°F	158
Injection molding-injection velocity		ISO 294	mm/s	240	in/s	9.5

Note: control measurements in other places may issue different results due to influences of machinery, equipment, test method or storage conditions.

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Test values

Unless specified to the contrary, the values given have been established on standardised test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

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