Hylac® EX19

Acrylonitrile Butadiene Styrene

Entec Polymers

Message:

Hylac®EX19 is an acrylonitrile butadiene styrene (ABS) material. This product is available in North America and is processed by blow molding or extrusion.
Hylac®The main features of EX19 are:
ROHS certification
Impact resistance

General Information	
Features	Ultra-high impact resistance
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Blow molding
	Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.03	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	0.30	g/10 min	ASTM D1238
220°C/10.0 kg	3.3	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.30 - 0.70	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	90		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	2140	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	31.0	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	46	%	ASTM D638
Flexural Modulus (23°C)	2070	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	59.3	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
23°C, 3.18 mm	480	J/m	ASTM D256
23°C, 6.35 mm	370	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	92.2	°C	ASTM D648
1.8 MPa, not annealed	82.2	°C	ASTM D648
Vicat Softening Temperature	104	°C	ASTM D1525
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257

Additional Information		
Volume Resistivity, ASTM D257: >10^15		
Extrusion	Nominal Value	Unit
Drying Temperature	85.0	°C
Drying Time	3.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	191 - 210	°C
Cylinder Zone 2 Temp.	191 - 210	°C
Cylinder Zone 3 Temp.	199 - 221	°C
Cylinder Zone 4 Temp.	199 - 221	°C
Cylinder Zone 5 Temp.	199 - 221	°C
Adapter Temperature	221 - 241	°C
Die Temperature	221 - 241	°C

Extrusion instructions

Hylac ABS extrusion grade resins should be dried to a moisture content of 0.02% or less prior to processing. Control of the outer stock temperature is important in successfully finishing the product. Typical temperatures of outer stock range from 160°F to 175°F after passing through a water bath. The bath temperature profile will greatly affect the dimensional stability and appearance of the part, and if not set up properly could be detrimental to the ultimate mechanical strength of the product. Extruders with one-stage or two-stage force venting are recommended for the extrusion of sheets or profiles. Compression ratios should be between 2.5/1 and 3.0/1 for a single screw and between 1.5/1 and .0/1 for a two-stage screw. L/D ratios of 20/1 and 36/1 are typical.Process Parameter:Zone 6: 430-465°FZone 7: 430-465°FOuter Die Zone: 435-475°FMid Die Zone: 430-465°FCenter Die Zone: 420-465°FDie Lip Thickness: 3.2-4.0 mmNip Roll Top: 185-195°FNip Roll Middle: 175-185°FNip Roll Bottom: 165-175°FScreen Pack Mesh (2 layers): #60-80Extrusion parameters were found by extruding 3.2mm thick sheets at a haul off speed of 1368 mm/min and an output rate of 210 kg/hr. A polishing roll in a up stack wrap arrangement was used as well as a single screw with a 100mm diameter screw, a L/D ratio of 35/1, and a compression ratio of 3/1.

Recommended distributors for this material

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