

Technical Data Sheet

Type: ESTANE® ZHF 80AT7 is an 80A aromatic Thermoplastic Polyurethane (TPU)

Features: Zero halogen, flame retardant compound with outstanding low temperature flexibilities

Uses: Extrusion – wire and cable jacketing and general extrusion where flexibility and low temperature performance properties are required.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	80+/- 3	Shore A	ASTM D-2240
Specific Gravity	1.24		ASTM D-792
Tensile Strength	2600 (17.9)	psi (MPa)	ASTM D-412
Ultimate Elongation	700	%	"
Tensile Stress at			
- 100 % Elongation	800 (5.5)	psi (MPa)	ASTM D-412
- 300 % Elongation	950 (6.6)	psi (MPa)	"
Tear Strength			
Graves	347 (6.29)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	110 (2.0)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.006 (188)	oz (mg)	ASTM D-3389 (H-18, 1000g)
Tm (by DMA)	375 (190)	°F (°C)	Lubrizol Advanced Materials
Tg (by DMA)	-80 (-62)	°F (°C)	Lubrizol Advanced Materials

- Prior to testing samples were conditioned at 23°C for 48 hours.
- Based on extruded sheet (30 mils).
- Listed values are "typical (average) values" and should / cannot be applied for specification purposes.

Supply Form and Standard Packaging

- ESTANE® ZHF 80AT7 is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, ESTANE® ZHF 80AT7 must be dried at 220°F (104°C) for 2-4 hours.
- It is recommended to dry the material in a desiccant type dryer. Target dew point should be -40°C.
- Depending on the applied processing technique, the maximum moisture level should be 0.02%.

Processing Conditions

- ESTANE® ZHF 80AT7 can be processed on any conventional extruder.

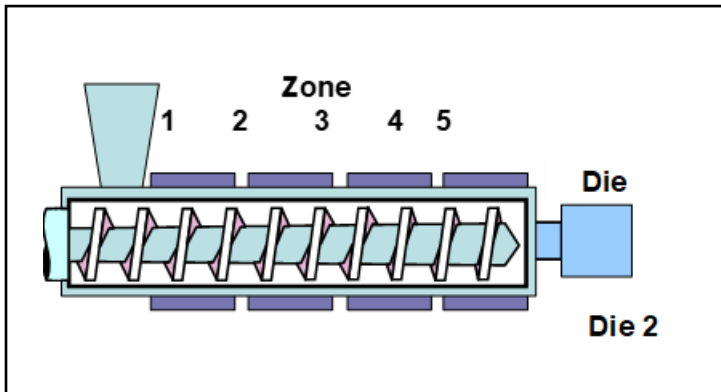
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Recommended Starting Extrusion Temperature Profile:



	°F/°C
Zone 1	345-355/174-179
Zone 2	355-375/179-190
Zone 3	365-385 /185-195
Zone 4	365-385 /185-195
Adapter (5)	370 /188
Die Zone 1 (6)	370 /188
Die Zone 2	370 /188

Melt Temp: 370 °F /188°C
Screen Pack Recommendation: 20/40/20

Application Information: zero halogen flame retardant TPU for high fire performance cable jacket

Application Properties	Value	Unit	Test Method
Limiting Oxygen Index	24	N/A	ASTM D2863
UL flame rating 125 mils (3.2 mm)	V-0	N/A	UL-94
Air Oven, 7 days, 121°C			
Strength Retention	TBD	%	
Elongation Retention	TBD	%	

For further information refer to Lubrizol Advanced Materials processing guides.

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