

Pellethane[®] 5863-91A TPU

Type: Aromatic Polyether-based Thermoplastic Polyurethane (TPU)

Features: High melt flow and good temperature resistance

Process: Extrusion

Properties	Test Method	Values	Units
Durometer Hardness, Shore	ASTM D2240	91	A
Specific Gravity	ASTM D792	1.13	
Tensile Modulus 100% elongation 300% elongation	ASTM D412	1300 (9.0) 2500 (17.2)	psi (MPa) psi (MPa)
Ultimate Tensile Strength	ASTM D412	5550 (38.3)	psi (MPa)
Ultimate Elongation	ASTM D412	525	%
Tear Strength Graves Trouser	ASTM D624 (die C) ASTM D470	340 (6.1) 102 (1.8)	lb/in (kg/mm) lb/in (kg/mm)
Taber Loss (1000 rev)	ASTM D3389 (H18, 1000g)	0.0014 (41)	oz (mg)
T _g (by DSC)	Lubrizol	-47 (-44)	°F (°C)
Flexural Modulus (23°C)	ASTM D790	5470	psi
Compression Set	22 hrs at 23°C	25	%
Compression Set	22 hrs at 70°C	60	%

- Prior to testing samples were conditioned at 23°C for 48 hours.
- Based on extruded sheet (30 mils)
- These test results are based on small samples and do not necessarily represent average results from larger test samples.
- This information should NOT be used for establishing engineering or manufacturing guidelines and specifications.

Handling Conditions:

Properties of all thermoplastic polyurethane products in the molten state are adversely affected by moisture. For the best results, always dry the material at least 2-4 hours at 104°C (220°F) in a machine mounted dehumidifying dryer (a desiccant dryer delivering air at 1 liter/sec/kg at -40°C dew point (1 cfm/lb at -40°F dew point). A dehumidifying dryer hopper or one shot loader is also recommended. Depending on the applied processing technique, the maximum moisture level should be 0.02%. Never to exceed 500°F (270°C) melt.

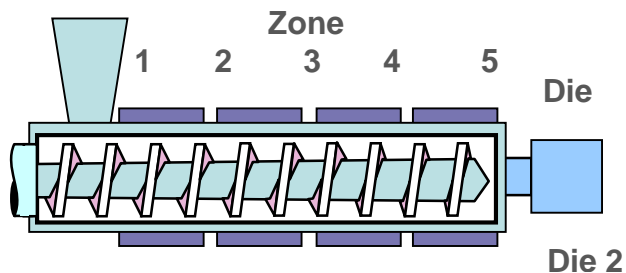
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Processing Conditions:

Pellethane® 5863-91A can be processed on any conventional extruder or molder.

Recommended Starting Extrusion Temperature Profile:



	°F/°C
Zone 1	350/177
Zone 2	360/182
Zone 3	375/191
Zone 4	385/196
Adapter 5	390/199
Die	385/196
Die 2	380/194

Screen Pack Recommendation:

20/40/80/20

For further information refer to Lubrizol Advanced Materials processing guides.

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