



Lubrizol LifeSciences

# Pellethane® 5855-92A TPU

**Type:** Aromatic Polyester-based Thermoplastic Polyurethane (TPU)

**Features:** Good physical properties, good chemical resistance, and a wide processing window for extrusion.

**Process:** Extrusion and Injection Molding.

Properties	Test Method	Values	Units
Durometer Hardness, Shore	ASTM D2240	92	A
Specific Gravity	ASTM D792	1.22	
Tensile Modulus 100% elongation 300% elongation	ASTM D412	1400 (9.7) 4200 (29.0)	psi (MPa) psi (MPa)
Ultimate Tensile Strength	ASTM D412	9000 (62.1)	psi (MPa)
Ultimate Elongation	ASTM D412	450	%
Tear Strength Graves Trouser	ASTM D624 (die C) ASTM D470	650 (11.6) 190 (3.4)	lb/in (kg/mm) lb/in (kg/mm)
Taber Loss (1000 rev)	ASTM D3389 (H18, 1000g)	0.00176 (50)	oz (mg)
T <sub>m</sub> (by DSC)	Lubrizol	266 (130)	°F (°C)
T <sub>g</sub> (by DSC)	Lubrizol	-4 (-20)	°F (°C)
<b>Application Properties</b>			
Tensile Set (200% elongation)	ASTM D412	20	%
Kofler Melt Point	Lubrizol	284 (140)	°F (°C)
Volume Swell in Ethanol (24h)	ASTM D471	12	%
Haze (65 mil between glass)	D1003	1.1	%

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.

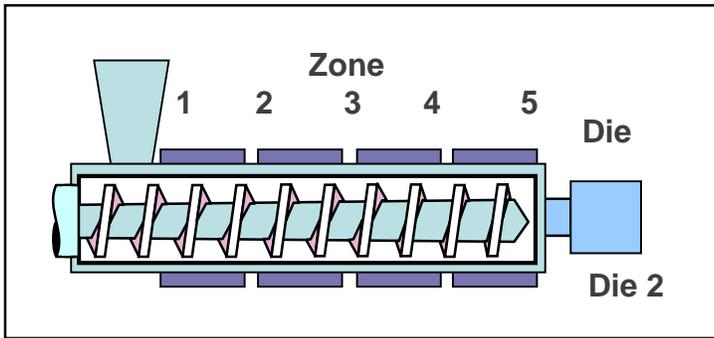
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**Processing Conditions:**

Pellethane® 5855-92A can be processed on any conventional extruder or mold.

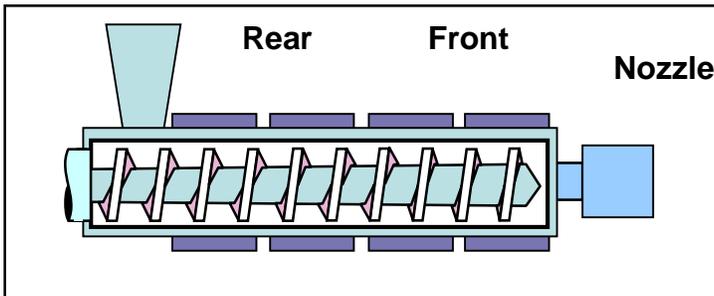
**Recommended Starting Extrusion Temperature Profile:**



	°F/°C
<b>Zone 1</b>	350/177
<b>Zone 2</b>	360/182
<b>Zone 3</b>	370/188
<b>Zone 4</b>	380/193
<b>Adapter 5</b>	390/199
<b>Die</b>	390/199
<b>Die 2</b>	390/199

Screen Pack Recommendation: 20/40/80/20

**Recommended Starting Injection Molding Temperature Profile:**



	°F/°C
<b>Rear</b>	370/188
<b>Front</b>	380/193
<b>Nozzle</b>	390/199
<b>Melt</b>	390/199
<b>Mold</b>	70/21

For further information refer to Lubrizol Advanced Materials processing guides.

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