

Pellethane® 58092 NAT 027

Type: Medical Grade Aromatic Polyester-based Thermoplastic Polyurethane (TPUs)

Features: Hydrocarbon resistance

Process: Extrusion, Injection Molding

Properties	Test Method	Values ⁽¹⁾
Physical		
Specific Gravity, g/cm ³	ASTM D 792	1.22
Durometer (Shore A)	ASTM D 2240	95A
Mechanical		
Tensile Strength at Break (psi)	ASTM D 412	9000
Elongation at Break (%)	ASTM D 412	430
Tensile Modulus at 100% (psi)	ASTM D 412	1500
Flexural Modulus (psi)	ASTM D790	6300
Thermal		
Vicat Softening (°C)	ASTM D1525	105
Glass Transition Temperature, T _g (°C) Second Heat	ASTM D3418	-10

(1) These test results are based on small samples of Pellethane® polyurethanes and do not necessarily represent average results from larger test samples. This information should not be used for establishing engineering or manufacturing guidelines.

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 85°C (185°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 (260°C) melt.

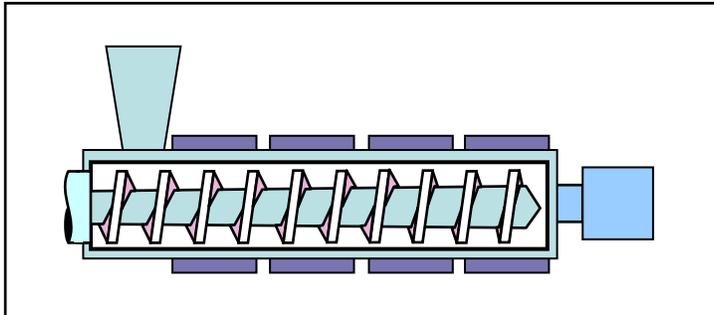
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Processing Conditions:

Pellethane® 58092 NAT 027 can be processed on any conventional single screw extruder. For additional information on extrusion, molding and drying of Lubrizol TPU resins, please refer to Lubrizol Advanced Materials processing guides at the link below.

Recommended Starting Extrusion Temperature Profile:



	°F/°C
Zone 1	365/185
Zone 2	370/188
Zone 3	370/188
Zone 4	380/193
Die	380/193

Screen Pack Recommendation:
20/80/100/20

For further information refer to Lubrizol Advanced Materials processing guides.
<https://www.lubrizol.com/Life-Sciences/Literature/Medical-Device-Literature>

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