

## TPU “90A” TECHNICAL DATA SHEET

Product Feature :

**TPU 90A** is a polyester based thermoplastic polyurethane elastomer (TPU) with good mechanical properties, good heat resistance, humidity resistance, and excellent abrasion resistance. It is both an injection moulding grade for injection technical parts, etc.

### Product Properties:

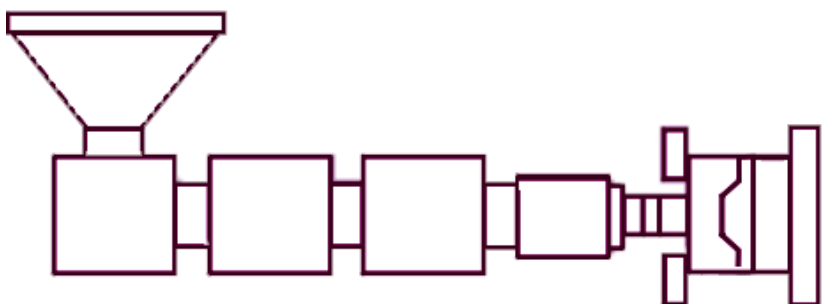
Typical Properties	Test Method	Units	Typical values*
Form	N/A	-	Granules
Color	N/A	-	Transparent
Hardness	ASTM D-2240	shore A	90
100% Modulus of elasticity	ASTM D412	MPa	8
Melt Volume-Flow Rate(MVR)	ASTM D-1238	cm <sup>3</sup> /10min	20/200°C/5Kg
Tensile Stress	ASTM D-412	MPa	38
Tear Strength	ASTM D-624	N/mm	120
Ultimate Elongation	ASTM D-412	%	850
Abrasion resistance	ISO 4649	mm <sup>3</sup>	30

\*Above data for reference only.

**Processing Guidelines:**

**Injection Moulding Guidelines**

Mold Shrinkage: 0.015 ~ 0.025 inch/inch  
 Injection Speed: Medium - Fast  
 Injection Pressure: Medium - Fast  
 Back Pressure: Low - Medium  
 Holding Pressure: Sufficient to pack the mould  
 Cooling: Can be demoulded when parts have sufficiently cooled

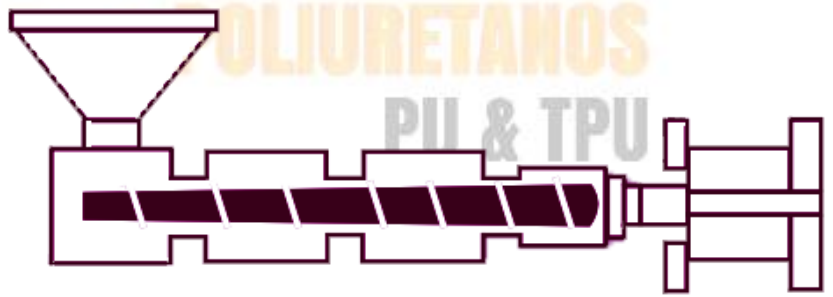


Barrel Temperature (°C)

150-170      170-190      180-200      200-215      25-45

**Extrusion Guidelines**

L/D Ratio: 20:1 - 25:1  
 Compression Ratio: 2.5 - 3.0  
 Breaker Plate/Screen: Both should be used  
 Draw Down: 5 - 10%  
 Cooling: Cold water bath



Barrel Temperature (°C)

150-170      200-210      210-230      200-235      180-200



**Processing Notes:**

- A、 Drying before processing, it is recommended to dry for 3-5 hours at 90 degrees centigrade. If it is damp, the drying time will be lengthened.
- B、 Cleaning the screw and die with PP or PE before and after processing.
- C、 The gate and runner can be recycled, but less than 15%.
- D、 PE/EVA base color masterbatch is better for coloring.



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