

**Product Feature :**

**TPU 85A** is a thermoplastic polyurethane elastomer. It has good good mechanical properties, good heat resistance, humidity resistance, and excellent flexibility under very low temperature. It is both an injection and extrusion molding grade for high-end products.

**Classifications** Plastic Type TPU

**Plastic Sub-Type** Polyester-based

**Applications:**

Wire & cable, high pressure oil tubes, conveyor belts, shoes, seals, screen packs.

Typical Properties	Test Method	Units	Typical values*
Form	N/A	-	Granules
Color	N/A	-	Transparent
Hardness	ASTM D-2240	Shore A	83
Gravity	ASTM D-792	g/cm3	1.18
100% Modulus of elasticity	ASTM D412	MPa	6
Tensile Stress	ASTM D-412	MPa	35
Tear Strength	ASTM D-624	N/mm	100
Ultimate Elongation	ASTM D-412	%	600
DIN Abrasion	DIN 53516	mm3	60
Yellow Index	ASTM E313	--	4

\* All these physical properties are based on injection molded samples, which are conditioned at 23 °C/50% for 24h. Above values are typical values and should not be used as specifications.

**Identifiers**

Chemical Name: MDI/ butylene glycol/ adipic acid copolymer CAS # 26375-23-5 Synonyms: Polyester-based TPU

**Processing methods:**

Injection, extrusion, calendaring, T-die extrusion

Special features: Excellent mechanical properties, outstanding abrasion resistance, short cycle time

Complying with FDA (21CFR 177.1680, 177.2600), RoHS, REACH, etc.

**Applications**

Elastic bands  
Automotive Parts  
Compounding  
Footwear  
Seals  
Conveyor belts  
Injection-molded engineering components  
Screen packs  
Oil tubes

**Value Propositions**

Short cycle time  
Good wear resistance  
Excellent Mechanical Properties

**Market Segments**

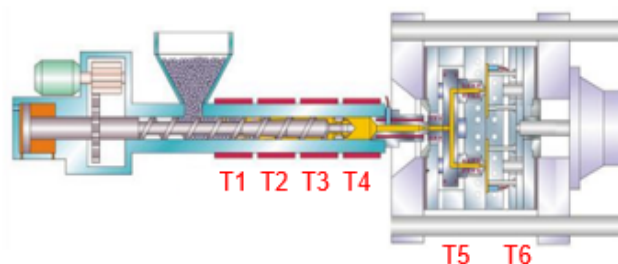
Plastics  
Wire & cable  
Footwear  
Films & Sheets  
Transportation  
Automotive

## Processing Guidelines

## TECHNICAL DATA SHEET

### Injection Moulding Guidelines

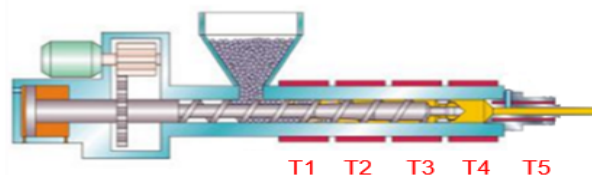
Mold Shrinkage:	0.015 ~ 0.025 inch/inch
Injection Speed:	Medium - Fast
Injection Pressure:	Medium - Fast
Back Pressure:	Low - Medium
Holding Pressure:	Sufficient to pack the mould
Cooling:	Can be demoulded when parts have sufficiently cooled



Barrel Temperature (°C)	T1: 150-170	T2: 170-190	T3: 180-200	T4: 200-215	T5/T6: 25-45
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### 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)	T1: 150-170	T2: 200-210	T3: 210-230	T4: 200-235	T5: 180-200
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### Processing Notes:

- Drying before processing, it is recommended to dry for 3-5 hours at 80 degrees centigrade. If it is damp, the drying time will be lengthened.
- Cleaning the screw and die with PP or PE before and after processing.
- The gate and runner can be recycled, but less than 15%.
- PE/EVA base color masterbatch is better for coloring.

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