Estane® TRX70 NAT 134

Technical Data Sheet

Type: Estane® TRX70 NAT 134 is a Thermoplastic Polyurethane (TPU).

Description: It is a polyester TPU with softness, excellent slip/abrasion resistance and fast cycle time

Uses: General injection molding, Footwear outsole

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	74	Shore A	ASTM D-2240
Specific Gravity	1.21		ASTM D-792
Tensile Strength	32.6	MPa	ASTM D-412
Ultimate Elongation	976.0	%	"
Tensile Stress at:			
- 100 % Elongation	3.46	MPa	ASTM D-412
- 300 % Elongation	6.14	MPa	"
Tear Strength			
Graves	87.7	kN/m	ASTM D-624 (die C)

Remark:

- Prior to testing samples were annealed at 100C for 15hrs or 80C for 24hrs and conditioned at 23°C for 48 hours.
- Based on injected part (2mm)
- Listed values are "typical (average) values" and should/cannot be applied for specification purposes

Application information

Physical Properties	Value (Metric)	Unit	Test Method
Abrasion Loss at room temperature *	42	mm^3	ISO 4649 method B
Abrasion Loss at 65C *	80	mm^3	ISO 4649 method B
Dry Coefficient of Friction	0.85		Lubrizol CoF
Wet Coefficient of Friction	0.57		Lubrizol CoF

***Recommended Annealing condition : 100C for 15hrs or 80C for 24hrs**
Before testing of abrasion loss, please condition annealed plaque at room temperature over 24hrs

Supply Form and Standard Packaging

• **Estane® TRX70 NAT 134** is supplied in pellet form and packaged in 25kgs bags.

Material Preparation

• Prior to processing, **Estane® TRX70 NAT 134** must be dried at **70~90** for 4-6 hours.
• It is recommended to dry the material in a desiccant type dryer. Target dew point should be **-40°C.**
• Depending on the applied processing technique, the maximum moisture level should be 0.05%.
• **Estane® TRX70 NAT 134** can be processed on any conventional injection molding machine.

http://go.lubrizol.com/EP

Recommended Starting INJECTION MOLDING Temperature Profile:

	°C
Zone 1	**190**
Zone 2	**195**
Zone 3	**200**
Nozzle	**195**

Injection pressure/Speed : Low/Slow

Mold shrinkage * : 0.010 (flex bar) cm/cm

** Mold shrinkage was determined using ASTM D955. Actual shrinkage will vary with part size, design and processing conditions. Please contact a Lubrizol technical representative for more information*

For further information refer to Lubrizol Advanced Materials processing guides.