

Thermoplastic Polyurethane Elastomer (TPU)

▶ Application

Molding method	Application	
Injection molding	Automotive parts	Ball joint, Dust cover, Tire chains, Side molding
	Machinery/ Industrial components	O-ring, Sealing materials, Gears, Connector
	Sporting goods	Sports shoes, Fin, Goggles
	Others	Watch band, Caster, Roller, Heel top piece of shoes
Extrusion molding	Hose/ Tube	Pressure-resistant hose, Tube, Inner part of fire hose
	Belt	Conveyor belt, Air mattress, Tarpaulin, Driving belt, Round belt
	Electrical wire/ Cable	Electrical wire/ Cable covering, Computer wiring, Curl cord
	Others	Ropes, Medical disposables
Calendar molding	Conveyor belt, Film, Flexible container	

▶ Characteristics

TPU for molding, developed with our original technology

- The best abrasion-resistance and the highest level of strength and elongation, compared with other elastomers based on polyester, polyolefin and polystyrene
- Settable shore hardness covering a wide range of variation
- Free from vulcanization process
- High recoverability and recyclability of scraps
- Well-balanced characteristics, such as cold-resistance and oil-resistance
- An abundant product grade with high functionality as shown below, and also capable of coloring various resins by using our CP series

▶ Representative Products

Standard grade

Product name	Polyol	Characteristics
P-1000	Ester	General-purpose grade
P-7000		Enhanced low temperature properties
P-2000	Ether	Hydrolysis-resistance, Antibacterial activity
P-4000	Caprolactone	Excellent in injection moldability
P-800	Polycarbonate	Hydrolysis-resistance, Antibacterial activity, Heat-resistance

Highly functional grade

Product name	Characteristics
PH (Heat-resistant type)	Higher heat-resistance compared with conventional TPU <ul style="list-style-type: none"> •Less compression strain under high temperature, and higher softening point •High resistance against heated oil/grease •Wide application range because of fewer changes in property in wide temperature range
PS (Non-adhesive type)	Characteristics of both silicone and TPU <ul style="list-style-type: none"> •Low adhesion and excellent releasability •Wide application range because of less decrease in elastic modulus under high temperature and fewer change in shore hardness under low temperature
PM (Moisture-permeable type)	Higher moisture-permeability (2~3 times as compared with conventional TPU) <ul style="list-style-type: none"> •Applicable to non-porous materials •Water-swelling and non-swelling types
P-8794S (Shock absorbing type)	Excellent in shock absorption property compared with conventional TPU <ul style="list-style-type: none"> •Excellent in hydrolysis-resistance, heat-resistance and oil-resistance, because of polycarbonate-based TPU •Greater variation in shore hardness with temperature compared with standard type

