

# Mirakutoran® TPU E480

Thermoplastic Polyurethane Elastomer Alloy

Japan Mirakutoran Inc.

## Message:

Our TPU "Mirakutoran ®" has the following outstanding features.

Has excellent wear resistance

Tensile strength, high mechanical strength and tear strength

Is a wide range of hardness

High impact strength

Oil resistance and good chemical resistance

Excellent low temperature properties, weather resistance, ozone resistance and is also good

Flexible rubber elastic, vibration-effective silencing

Compared to other urethane elastomer thermoplastic that is more

Playback can be processed

Vulcanization process without curing reaction, very high productivity

Resins and other polymer is easy

Solution is easily dissolved in solvent process

Mirakutoran to the standard type E and P are two types.

Type E has a certain cross-linked structure in the molecule, and excellent mechanical strength and compression set. P type is characterized by good liquidity linear structure

General Information	
Features	Shock absorption
	Impact resistance, good
	Good strength
	Good flexibility
	Good tear strength
	Ozone resistance
	Low temperature resistance
	Good chemical resistance
	Good wear resistance
	Good weather resistance
	Oil resistance

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 23°C, 2.00mm, injection molding)	78 - 82		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (23°C, 1000 Cycles, 1000 g, H-22 Wheel)	30.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress <sup>1</sup> (100% strain, 23°C, 2.00mm)	5.00	MPa	ASTM D412
Tensile Strength <sup>2</sup> (Yield, 23°C, 2.00 mm)	44.0	MPa	ASTM D412

Tensile Elongation <sup>3</sup> (Break, 23°C, 2.00 mm)	580	%	ASTM D412
Tear Strength <sup>4</sup> (23°C, 2.00 mm)	98.0	kN/m	ASTM D624
Compression Set (70°C, 22 hr)	32	%	ASTM D395
Rebound Resilience (23°C, 2.00 mm)	60	%	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-45.0	°C	DSC
Vicat Softening Temperature	100	°C	ASTM D1525 <sup>5</sup>
Additional Information			
Test Methods: JIS K7311, K6262, K7206			
NOTE			
1.	300 mm/min		
2.	300 mm/min		
3.	300 mm/min		
4.	300 mm/min		
5.	压力1 (10N)		

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