

# Mirakutoran® TPU P495

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	1.21	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 23°C, 2.00mm, injection molding	93 - 97		ASTM D2240
Shore D, 23°C, 2.00mm, injection molding	46		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (23°C, 1000 Cycles, 1000 g, H-22 Wheel)	60.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress <sup>1</sup> (100% strain, 23°C, 2.00mm)	8.00	MPa	ASTM D412
Tensile Strength <sup>2</sup> (Yield, 23°C, 2.00 mm)	55.0	MPa	ASTM D412
Tensile Elongation <sup>3</sup> (Break, 23°C, 2.00 mm)	500	%	ASTM D412
Tear Strength <sup>4</sup> (23°C, 2.00 mm)	107	kN/m	ASTM D624
Compression Set (70°C, 22 hr)	38	%	ASTM D395
Rebound Resilience (23°C, 2.00 mm)	34	%	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°C	DSC
Vicat Softening Temperature	117	°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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