# Mirakutoran® TPU E595

### 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	1.18	g/cm³	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	46		
molding	46		ASTM D2240

molding	46		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (23°C, 1000	)		
Cycles, 1000 g, H-22 Wheel)	35.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress <sup>1</sup> (100% strain, 23°C,			
2.00mm)	12.0	MPa	ASTM D412
Tensile Strength <sup>2</sup> (Yield, 23°C, 2.00 mm)	53.0	MPa	ASTM D412
Tensile Elongation <sup>3</sup> (Break, 23°C, 2.00 mm)	480	%	ASTM D412
Tear Strength <sup>4</sup> (23°C, 2.00 mm)	147	kN/m	ASTM D624
Rebound Resilience (23°C, 2.00 mm)	42	%	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	131	°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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