



## Thermoplastic Polyurethane (TPU)

### SPECIFICATIONS

Property	Spec	Value
Hardness	DIN 53505	97 A
Hardness	DIN 53506	52D
Density (g/ cm <sup>3</sup> )	DIN 53479	1.22
Tensile Strength (N/ mm <sup>2</sup> )	DIN 53504	50
Ultimate Elongation	DIN 53504	450%
20% Modulus (N/ mm <sup>2</sup> )	DIN 53504	10
100% Modulus (N/ mm <sup>2</sup> )	DIN 53504	14
300% Modulus (N/ mm <sup>2</sup> )	DIN 53504	28
Elasticity	DIN 53512	35%
<b>Tear Strength</b>		
Abrasion (mm)	DIN 53516	40
Impact Resilience	DIN 53512	38%
Compression Set 70C 24 Hrs	DIN 53517	30%
Compression Set 100C 24hrs	DIN 53517	35%
Brittle Point	DIN 53479	-40

### DESCRIPTION

MP02 is a TPU material with hardness 97 Shore A, specially compounded for high-performance applications. The polyurethane polymer industry has enormous categories of products for a wide variety of applications. Polyurethane used in the seal industry is a thermoplastic elastomer (TPU). As the name suggests, it behaves like an elastomer but the chemistry is of a thermoplastic. The elasticity of a TPU is brought about through polymer morphology phase changes as in thermoplastics not through vulcanization as seen in other elastomers. Because of its thermoplastic nature, TPU has excellent tensile strength and abrasion resistance that other elastomers are unable to match. Meanwhile, TPUs also have good flexibility and shock absorbing performance. An additional advantage of TPUs is that they can be molded using conventional thermoplastic processes.