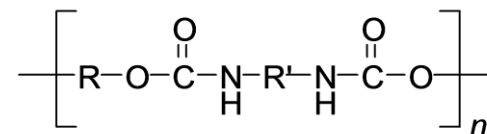


Low Temperature Thermoplastic Polyurethane (TPU)



SPECIFICATIONS

Property	Spec	Value
Hardness	ISO 868	96A ±2
Hardness	ISO 868	50D ±3
Density (g/cm ³)	ISO 1183	1.13
Tensile Strength (N/mm ²)	DIN 53504	≥45
Ultimate Elongation	DIN 53504	≥450%
100% Modulus (N/mm ²)	DIN 53504	≥12
300% Modulus (N/mm ²)	DIN 53504	≥22
Tear Strength (kN/m)	DIN ISO 34-1 (B)	≥80
Abrasion (mm ³)	DIN 53516	20
Compression Set 70C 24hrs @ 25% deflection	ISO 815	≤25%
Compression Set 100C 24hrs @ 25% deflection	ISO 815	≤30%
Minimum Service Temp.		-55° C -67° F
Maximum Service Temp.		110° C 230° F
Color		Blue

DESCRIPTION

MP57 is a TPU material with hardness 96 Shore A and 50D, specially compounded for low temperature 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.