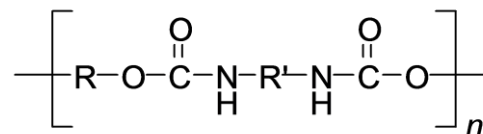


Polyurethane/Urethane (TPU)

SPECIFICATIONS

Property	Spec	Value
Hardness (Shore A)	D2240	95
Tensile Strength (MPa)	D412 Die C	33.7
Elongation (%)	D412 Die C	464
Specific Gravity	D1817	1.20
Heat Resistance (100°C × 70hrs) BG Basic Requirement	D573	
Hardness Change		0
Tensile Strength Change		-4
Elongation Change		+1
Volume Change		0
Compression Set (100°C × 22hrs)	D395B	
IRM 901 Oil (100°C × 70hrs) -E014	D471	
Hardness Change		0
Tensile Strength Change		-4
Elongation Change		+3
Volume Change		0
IRM 903 Oil (100°C × 70hrs) -E034	D471	
Hardness Change		0
Tensile Strength Change		+9
Elongation Change		+14
Volume Change		+5
Water (100°C × 70hrs) -EA14	D471	
Hardness Change		0
Tensile Strength Change		-21
Elongation Change		+14
Volume Change		+2
Color		Blue



DESCRIPTION

MP50 is a TPU material with hardness 95 Shore A. 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.