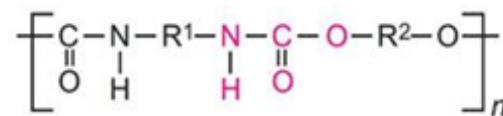


## Thermoplastic Polyurethane (H-PU, TPU)



### SPECIFICATIONS

Property	Spec	Value
Hardness	ISO 868	95A ±2
Hardness	ISO 868	48D ±3
Density (g/cm <sup>3</sup> )	ISO 1183	1.20
Tensile Strength (N/mm <sup>2</sup> )	DIN 53504	50
Ultimate Elongation	DIN 53504	350%
100% Modulus (N/mm <sup>2</sup> )	DIN 53504	15
300% Modulus (N/mm <sup>2</sup> )	DIN 53504	28
Tear Strength (kN/m)	DIN ISO 34-1 (B)	110
Abrasion (mm <sup>3</sup> )	DIN 53516	17
Compression Set 70C 24 Hrs @ 25% deflection	ISO 815	27%
Compression Set 100C 24hrs @ 25% deflection	ISO 815	33%
Minimum Service Temp.		-20° C -4° F
Maximum Service Temp.		115° C 239° F
Maximum Service Temp - Water		82° C 180° F
Maximum Service Temp - Water/Glycol		65° C 150° F
Color		Red
Use in Food Applications	FCN 000735	Approved

### DESCRIPTION

MP03 is a H-PU, TPU material with hardness 95 Shore A and 48 D, specially compounded for use in high pressure hydraulic seals. The material is hydrolysis resistant making it suitable for use with many water based hydraulic fluids. 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. MP03 can also be used in food grade applications.