

MP09

H-Polyurethane (Blue)

$$- \left[\begin{array}{c} O \\ R - O - C - N - R - N - C - O \end{array} \right]_{n}$$

SPECIFICATIONS

Property	ASTM	Value
Hardness at 20°C	D 2240 Shore A	90
100% modulus	D 412	6.9 MPa
300% modulus	D 412	11.7 MPa
Tensile Strength	D 412	28.3 MPa
Elongation at Break	D 412	450 %
Tear strength: without nick	D 624	64.8 KN/m
Tear strength: with nick	D 624	11.4 KN/m
Resilience	D 2632	50%
Abrasion loss	DIN 53516	-
Compression set 25% deflection 22 hours @ 70° C	D 395-B	25%
Hardness at -5°C	Shore A	-
Hardness at +80°C	Shore A	-
Glass temperature	°C	-70
Critical Temperature	°C	120
Specific Gravity	g/cm^3	1.08
Color		Blue

DESCRIPTION

MP09 is a HPU material with hardness 90A, specially compounded thermoplastic polyurethane with resistance to hydrolysis. 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.