

M SEALS UHM-WD60

Ultra-High Molecular Weight Polyethylene

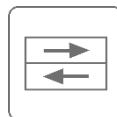
MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Wear Resistance



Low Water Absorption



Low Friction



GRAS

Description

M Seals material UHM-WD60 is a member of the thermoplastic polyethylene group. It is a very tough material, with extremely high impact strength, excellent resistance to corrosive chemicals, excellent low-temperature characteristics and a coefficient of friction comparable to PTFE but with much better abrasion resistance.

Physical Properties

Property	Test method	Unit	Typical value	
Shore Hardness	ISO 868	Shore D	Ext Rod	Mld Tube
Modulus of elasticity	ISO 527-1	Mpa	60	61
Moisture Absorption in air (23°C / 50% RH)	ISO 62	%	700	680
Density	ISO 1183-1	g/cm ³	0.01	0.01
Izod Impact Strength	ISO 180-1A	Kj/m ²	0.93	0.93
Coefficient Of Linear Thermal Expansion	ISO 11359-1	10 ⁻⁵ K ⁻¹	-	>130
Coefficient Of Friction**		μ	18	15
Service temperature (Long term)		°C	0.25	0.25
Service temperature (short term - max)		°C	-200	+80

** coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

Main Characteristics

- High Impact strength
- Low moisture uptake
- Good wear and sliding properties
- Corrosive chemical resistance
- Excellent low-temperature properties
- GRAS - Generally Recognised As Safe (for food contact)

Typical Products

- Anti-Extrusion / Back-up Rings
- Bearing rings / guide rings
- Spring Energised Seals
- Scraper seals
- Bespoke parts
- Soft seats

Typical Applications

Due to its excellent wear resistance, low moisture uptake and excellent sliding properties, UHM-WD60 is an excellent material choice for guide rings, bearing rings, valve seats, scraper rings and spring energised seals commonly used in the sealing industry. UHM-WD60 is limited by its upper temperature limit. The material is also generally recognised as safe for food contact applications (GRAS).

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