

M SEALS UHM-WD60

Ultra-High Molecular Weight Polyethylene

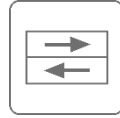
MATERIAL DATA SHEET (Version 6.0 – 05.2022)



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

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: sales.esd@m-seals.co.uk . Web: www.m-seals.com

M Seals believes that the information above is an accurate description of the typical characteristics and/or uses of the product or products, however M Seals makes no warranty, expressed or implied, that parts manufactured from this / and or any other material will perform satisfactorily in the customers application. It is the customers responsibility to thoroughly test products in their specific application to determine performance, efficiency and safety for each end-use product, device or application. The information and data contained herein are based on standard test pieces according to the corresponding ISO, DIN & ASTM standards and cannot be directly related to finished seals, gaskets or other sealing products and should be used only as a general guide.