

# M SEALS UHM-MD-D62

Blue Metal Detectable  
Ultra High Molecular Weight Polyethylene



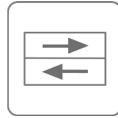
## MATERIAL DATA SHEET (Version 6.0 – 05.2022)



Wear Resistance



Low Water Absorption



Low Friction



Metal Detectable

### Description

M Seals material UHM-MD-D62 is a member of the thermoplastic polyethylene group that has been modified through the addition of a metal detectable ingredient and pigmented blue in colour for easier identification. It was developed specifically for use in food industry applications using metal detection and optical camera detection to identify possible contamination in food products.

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     |
|--------------------------------------------|-------------|----------------------|-------------------|
| Colour                                     |             |                      | Blue              |
| Shore Hardness                             | ISO 868     | Shore D              | 62                |
| Tensile modulus of elasticity              | ISO 527     | Mpa                  | 684               |
| Yield stress                               | ISO 527     | Mpa                  | 19                |
| Moisture Absorption in air (23°C / 50% RH) | ISO 62      | %                    | 0.01              |
| Density                                    | ISO 1183-1  | g/cm <sup>3</sup>    | 1.01              |
| Coefficient Of Linear Thermal Expansion    | ISO 11359-1 | 10 <sup>-6</sup> / K | 150-230           |
| Volume resistivity                         | IEC 60093   | Ω * cm               | >10 <sup>12</sup> |
| Surface resistivity                        | IEC 60093   | Ω                    | >10 <sup>12</sup> |
| Service temperature (Long term)            |             | °C                   | -100              |
| Service temperature (short term - max)     |             | °C                   | +80               |

### Main Characteristics

- High Impact strength
- Low moisture uptake
- Good wear and sliding properties
- Metal detectable
- Excellent low-temperature properties

### Typical Products

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

### Typical Applications

Due to its metal detectability, excellent wear resistance, low moisture uptake and excellent sliding properties, UHM-MD-D62 is an excellent material choice for guide rings, bearing rings, valve seats, scraper rings and spring energised seals commonly used in the food and beverage industries.

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