

# DMR Material HDPE-ND63

## High Density Polyethylene Engineering Thermoplastic



### MATERIAL DATA SHEET (Version 5.0 – 09.2018)

#### Description

DMR material HDPE-ND63 is a High-Density Polyethylene engineering thermoplastic which is commonly referred to as PE300, HDPE and / or PEHD. The material has good chemical resistance, low coefficient of friction, excellent wear resistance, good sliding properties and very low moisture absorption.

These properties make HDPE-ND63 a versatile engineering thermoplastic which can be used for a wide range of components in multiple industries.

#### Physical Properties

Property	Test method	Unit	Typical value
Colour			Natural / White
Shore Hardness	Shore D	DIN ISO 868	63
Yield stress	ISO 527	MPa	22
Elongation at break	ISO 527	%	>50
Tensile Modulus of elasticity	ISO 527	MPa	800
Water absorption	ISO 62	%	<0.01
Density	ISO 1183-1	g/cm <sup>3</sup>	0.95
Surface resistivity	IEC 60093	Ohm	>10 <sup>14</sup>
Volume resistivity	IEC 60093	Ohm cm	>10 <sup>14</sup>
Melting Point	ISO 11357-3	°C	133
Heat Deflection Temperature	ISO 306 B	°C	67
Coefficient Of Linear Thermal Expansion		10 <sup>-6</sup> K <sup>-1</sup>	150-230
Service temperature (Long term)		°C	-50 to +80
Service temperature (short term - max)		°C	+100

#### Main Characteristics

- FDA compliant
- Good chemical resistance
- Low friction
- Low water absorption
- Good wear and sliding properties

#### Typical products

- Anti-Extrusion / Back-up Rings
- Bearing rings / guide rings
- Bushes
- Bespoke parts
- Liners

#### Typical Applications

Due to its good low frictional properties and moisture uptake, HDPE-ND63 is an good material choice for bearing bushes, rollers, thrust washers and liners commonly used in the food industry.

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: [sales@dmrseals.co.uk](mailto:sales@dmrseals.co.uk) . Web: [www.dmrseals.co.uk](http://www.dmrseals.co.uk)

DMR Seals Ltd believes that the information above is an accurate description of the typical characteristics and/or uses of the product or products, however DMR Seals Ltd 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.