M SEALS **HDPE-ND63**

High Density Polyethylene Engineering Thermoplastic

MATERIAL DATA SHEET (Version 6.0 – 05.2022)

Description

M Seals 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^3	0.95
Surface resistivity	IEC 60093	Ohm	$>10^{14}$
Volume resistivity	IEC 60093	Ohm cm	$>10^{14}$
Melting Point	ISO 11357-3	°C	133
Heat Deflection Temperature	ISO 306 B	°C	67
Coefficient Of Linear Thermal Expansion		10^{-6} K^{-1}	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.

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