

PRODUCT INFORMATION
OKULEN® 2000 - MD - FN5790

OKULEN® 2000 - MD - FN5790 is a "Metal Detectable" UHMW-PE polymer compound with a molecular weight of 7 - 9 mio. g/mol..

The material has a very good wear resistance, a low coefficient of friction and a high impact strength. Responsibility to review the detection rate is up to the end user.

Properties:

- metal detectable
- good sliding properties
- very good abrasion resistance
- excellent chemical resistance
- good impact strength
- EU1935/2004-conform
- EU10/2011-conform
- FDA-conform

Colour:

Azure blue FN5790 - similar RAL 5009

Range of applications:

- Food industry
- Conveying industry

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Characteristics and standard values

Properties	Method	OKULEN® 2000 - MD - FN5790	
		SI	US
Physical properties			
Molecular-weight	k.a.	7.0 - 9.0 Mio. g/mol.	7.0 - 9.0 Mio. g/mol.
Density	DINENISO 1183-1 (09/2019) ASTM D792	> 1.05 g/cm ³	> 65.549 lb/ft ³
Notched impact strength	DINENISO 21304-2 (04/2021)	> 100 kJ/m ²	> 47.55 ft-lb/in ²
Abrasion-Index (Sand-Slurry)	DINENISO 15527 (05/2022)	90	90
Tensile strength at yield (1B - 50mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 17 N/mm ²	> 2465 psi
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Elongation (Break / 1B - 50mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 200 %	> 200 %
Tensile-E-modulus (1B - 1mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 650 N/mm ²	> 94250 psi
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Static Friction	ASTM D 1894 (2014)	~ 0.20	~ 0.20
Dynamic Friction	ASTM D 1894 (2014)	~ 0.18	~ 0.18
Shore-D-Hardness, 3 sec. value 6 mm plate	DINENISO 868 (10/2003)	66 D	66 D
Ball indentation hardness	DINENISO 2039	--- N/mm ²	--- psi
Water absorption	DINENISO 62 (05/2008)	< 0.1 %	< 0.1 %
Thermal properties			
Melting Point (DSC)	DINENISO 11357-1 (03/2010)	135 - 137 °C	275 - 278.6 °F
Thermal Conductivity	Wire method	~ 0.41 W/m*K	~ 2.84253 (BTU-in)/hr-ft ² -°F
Max. operation temperature	Literature	~ 80 °C	~ 176 °F
Coefficient of thermal expansion (23 - 80°C)	ISO 11359	~ 0.00015 - 0.00020 mm/mm °C	~ 0.000083 - 0.000111 in/in °F
Electrical properties			
Volume resistivity	DINEN 62631-3-1 (01/2017)	>= 1.0E13 Ohm*cm	>= 1.0E13 Ohm*cm
Surface resistivity	DINEN 62631-3-2 (10/2016)	>= 1.0E12 Ohm	>= 1.0E12 Ohm
ATEX-Directive - TÜV approved!	ATEX-Directive	---	---
ESD-D	---	--- Ohm	--- Ohm
Burning properties			
Fire resistance (Self-classification)	DIN 4102	B2 Klasse	B2 Class
Fire resistance (Self-classification)	UL94	HB Klasse	HB Class
Physiological properties			
Food compliant		EU/FDA	EU/FDA

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