

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

The above data are based on the present knowledge and are given without guarantee. Existing laws and conditions are to be respected by the user of our products. The decision about the suitability of a material for a certain application must be made by the user. We reserve the right to alter the indicated data. The indicated values are for a 15 mm thick sheet, unannealed. Black sheets may have antistatic properties.

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