

PRODUCT INFORMATION
OKULEN® 1000 - UV black - FN9100

OKULEN® 1000 - UV black - FN9100 is an ultra high molecular low pressure polyethylene (UHMW-PE) with a molecular weight of 3 - 5.000.000 g/mol..

Properties:

- UV stabilized
- EU1935/2004 - conform
- EU10/2011 - conform
- FDA - conform

Colour:

black FN9100 / simillar RAL9005

Range of applications:

- Mechanical engineering
- Conveying industry
- Outdoor applications

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Characteristics and standard values

Properties	Method	OKULEN® 1000 - UV black - FN9100	
		SI	US
Physical properties			
Molecular-weight	k.a.	3.0 - 5.0 Mio. g/mol.	3.0 - 5.0 Mio. g/mol.
Density	DINENISO 1183-1 (09/2019) ASTM D792	> 0.940 g/cm ³	> 58.682 lb/ft ³
Notched impact strength	DINENISO 21304-2 (04/2021)	120 kJ/m ²	57.06 ft-lb/in ²
Abrasion-Index (Sand-Slurry)	DINENISO 15527 (05/2022)	100	100
Tensile strength at yield (1B - 50mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 18 N/mm ²	> 2610 psi
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Elongation (Break / 1B - 50mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 250 %	> 250 %
Tensile-E-modulus (1B - 1mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	700 N/mm ²	101500 psi
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Static Friction	ASTM D 1894 (2014)	~ 0.15 - 0.20	~ 0.15 - 0.20
Dynamic Friction	ASTM D 1894 (2014)	~ 0.10 - 0.15	~ 0.10 - 0.15
Shore-D-Hardness, 3 sec. value 6 mm plate	DINENISO 868 (10/2003)	61 - 65 D	61 - 65 D
Ball indentation hardness	DINENISO 2039	~ 35 N/mm ²	~ 5075 psi
Water absorption	DINENISO 62 (05/2008)	< 0.01 %	< 0.01 %
Thermal properties			
Melting Point (DSC)	DINENISO 11357-1 (03/2010)	133 - 135 °C	271.4 - 275 °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)	< 1.0E6 Ohm*cm	< 1.0E6 Ohm*cm
Surface resistivity	DINEN 62631-3-2 (10/2016)	< 1.0E6 Ohm	< 1.0E6 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.