

**PRODUCT INFORMATION**  
**OKULEN<sup>®</sup> 1000 - ESD - FN9060**

OKULEN<sup>®</sup> 1000 - ESD - FN9060 is an ultra high molecular low pressure polyethylene (UHMW-PE) with a molecular weight of 3 - 5.000.000 g/mol..

Properties:

- good wear resistance
- high notched impact strength
- electrically dissipative properties (ESD-D)
- Surface resistivity between 1.0E6 to 1.0E9 Ohms

Colour:

black FN9060

Range of applications:

- Semiconductor industry
- Electronic industry
- Conveyor industry

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## Characteristics and standard values

Properties	Method	OKULEN® 1000 - ESD - FN9060	
		SI	US
<b>Physical properties</b>			
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	> 0.950 g/cm <sup>3</sup>	> 59.306 lb/ft <sup>3</sup>
Notched impact strength	DINENISO 21304-2 (04/2021)	> 140 kJ/m <sup>2</sup>	> 66.57 ft-lb/in <sup>2</sup>
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 <sup>2</sup>	> 2610 psi
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Elongation (Break / 1B - 50mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 350 %	> 350 %
Tensile-E-modulus (1B - 1mm/Min.)	DINENISO 527-2 (06/2012) ASTM D 638 (2010)	> 680 N/mm <sup>2</sup>	> 98600 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 <sup>2</sup>	5075 psi
Water absorption	DINENISO 62 (05/2008)	< 0.01 %	< 0.01 %
<b>Thermal properties</b>			
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 <sup>2</sup> -°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
<b>Electrical properties</b>			
Volume resistivity	DINEN 62631-3-1 (01/2017)	--- Ohm*cm	--- Ohm*cm
Surface resistivity	DINEN 62631-3-2 (10/2016)	<1.0E9 - >1.0E6 Ohm	<1.0E9- >1.0E6 Ohm
ATEX-Directive - TÜV approved!	ATEX-Directive	---	---
ESD-D	---	1.0E6 - 1.0E9 Ohm	1.0E6- 1.0E9 Ohm
<b>Burning properties</b>			
Fire resistance (Self-classification)	DIN 4102	B2 Klasse	B2 Class
Fire resistance (Self-classification)	UL94	HB Klasse	HB Class
<b>Physiological properties</b>			
Food compliant		Nein / No	Nein / No

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