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A Joint Venture of TSE Industries, Inc., Clearwater, Florida
 and Ottensteiner Kunststoff, GmbH & Co. KG, Germany

**plastics
for
industry**

Characteristics and standard values for OK 1000 (PE-UHMW) types

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Material	OK 1000	virgin	no. 901	no. 911	no. 931	no. 94	no. 962	repro	repro
color	natural	colored	black	uv-stab.	antistatic	conductive	MoS ₂ -Moly-	green black	multi-color
FDA-approved: 1 = yes, 2 = no	1	1	1	1	1	2	2	2	2

Mechanical Properties

Density	ISO 1183-A / ASTM D-792	g/cm ³	0,93	0,93	0,93	0,94	0,95	0,97	0,94	0,94	
Abrasion - Internal method acc. to DIN 58836 (Slurry-Test rel. to GUR 4120 = 100 %)		%	100	100	100	100 - 110	110 - 120	110 - 120	100	140	145
Tensile strength	ISO/R 527 / ASTM D-638	N/mm ²	20	15 - 20	15 - 20	15 - 20	15 - 20	15 - 20	15 - 20	14 - 17	14 - 17
Break elongation	ISO/R 527 / ASTM D-638	%	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50
Creep properties under varying compressive stress		N/mm ²	10	10	10	10	10	10	10	10	10
Coefficient of friction, ASTM 1894 metal=Rz 2,5µ, Pm = 2 N/mm ² , v = 150mm/min,		static	µ	0,18	0,18	0,18	0,18	0,17	0,17	0,15	0,20
		dynamic	µ	0,13	0,13	0,13	0,13	0,12	0,12	0,10	0,15
Shore D Hardness,	ISO 868 / ASTM D-2240		63	63	63	63	63	63	63	64	64

Thermal Properties

Melt point DSC	ISO 3146 / ASTM D-3417		135 - 137 °C / 275 - 278 °F								
Permanente operation temperature, max.			80 °C / 176°F								
Coefficient of linear expansion	DIN 53752 / ASTM D-696		23 - 80°C ≈ 2*10 ⁻⁴ /K / 73-176°F ≈ 1,1 * 10 ⁻⁴ /F								

Electrical Properties

Volume resistivity	IEC 93 / ASTM D-257	Ω*cm	>10¹⁴	<10 ¹⁴	<10 ¹⁴	<10 ¹⁰	<10 ⁹	<10 ³	<10 ¹⁴	<10 ¹⁴	<10 ¹⁴
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