



# TSE-OKULEN Americas, L.L.C.

4370 112th Terrace North, Clearwater, Florida 33762  
 www.TSE-OK.com E-mail: info@TSE-OK.com

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 2000 (PE-UHMW) special types

29.10.2003

Data sheet PB012\_C Page 8

Material	CL	F-Ex	GB	T	Q	GB	SGB	588	589
color	red no. 385	silv.- bl. no. 999	green no. 675	grey no. 777	yellow no. 181	black no. 983	light grey no. 706	blue no. 588	blue no. 589
FDA-approved: 1 = yes, 2 = no	2	2	2	2	2	2	2	2	2

### Mechanical Properties

Density ISO 1183-A / ASTM D-792	<b>g/cm<sup>3</sup></b>	0,96	1,01	0,95	0,93	0,94	0,95	0,95	0,94	0,93
Abrasion - Internal method acc. to DIN 58836 (Slurry-Test rel. to GUR 4120 = 100 %)	<b>%</b>	64	125	65	76	62	65	66	74	80
Tensile strength ISO/R 527 / ASTM D-638	<b>N/mm<sup>2</sup></b>	≥ 17	≥ 17	≥ 18	≥ 17	≥ 17	≥ 18	≥ 19	≥ 17	≥ 17
Break elongation ISO/R 527 / ASTM D-638	<b>%</b>	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	≥ 50
Creep properties under varying compressive stress	<b>N/mm<sup>2</sup></b>	13	---	11	9	11	11	11	10	8
Coefficient of friction, ASTM 1894 metal=Rz 2,5μ, Pm = 2 N/mm <sup>2</sup> , v = 150mm/min,	static μ dynamic μ	0,14 0,10	0,16 0,11	0,14 0,09	0,16 0,10	0,13 0,08	0,14 0,09	0,13 0,08	0,16 0,12	0,15 0,09
Shore D Hardness, ISO 868 / ASTM D-2240		67	62	65	62	66	65	65	64	61

### 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 <sup>-4</sup> /K / 73-176°F ≈ 1,1 * 10 <sup>-4</sup> /F								

### Electrical Properties

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

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.