

## Cutout from the standard DIN 16972 for press-sintered-sheets UHMW-PE (ultra-high-molekularweight-polyethylene), HMW-PE, PE-HD

Mai 2005

**TG 1** **OK 2000**, UHMW-PE,  
for applications in which **maximum wear / abrasion resistance** is essential, e.g. **centrifugal pumps** for flue gas desulphurization units, **suction box covers / foils** in paper machines, **linings** etc..

Products can be interchanged between the TG1 and TG2 based upon the specific toughness and/or wear-requirements of the application.

**TG 2** **OK 1000**, UHMW-PE,  
**with extremely high toughness** level and **very good wear resistance** for applications/products in **mechanical and plant engineering**, in **storage systems** and **materials handling**, e.g. **profiles for chain and belt drives, curved guiding mechanisms, chain deflecting and tensioning devices, profiles for chain racks, slide rails for conveying systems, and bunker and silo linings.**

Other fields of application are in **refrigeration technology** (sales, sleeves, piston rings to withstand temperatures down -269°C), in extraction units (**dynamic seals**), in **fittings** (slide valves, butterfly valves) in **electroplating** (drums, bearings) etc.

**TG 3** **OK 500**, HMW-PE,  
for products such as **cutting underlays** in the food/catering industry, in which the sheet grades must meet the cutting resistance and hygiene requirements, **barries** for ice rinks etc..

**TG 4** **PE 300**, HD-PE,  
for applications in plant engineering and tank construction, for shaft floors in sewage systems etc., in which advantage is taken of the large sheet sizes and thicknesses, the all-round chemical resistance and the good weldability..

### Physical properties

Raw material		UHMW-PE		HMW-PE	HD-PE
Sheet group (TG)		1	2	3	4
Density	[g/cm <sup>3</sup> ]	0,922-0,942		0,950-0,957	0,942-0,955
<b>Abrasion (Sand-Slurry-Test)</b>	<b>[-]</b>	<b>80</b>	<b>100</b>	<b>400</b>	<b>≥ 600</b>
Tensile stress at yield	[N/mm <sup>2</sup> ]	≥ 17	≥ 17	≥ 20	≥ 19
Elongation at yield	[%]	≥ 8	≥ 8	≥ 8	≥ 8
Modulus of elastics	[N/mm <sup>2</sup> ]	≥ 700	≥ 700	≥ 800	≥ 700
<b>Notched Impact Strentgh ***</b>	<b>[kJ/m<sup>2</sup>]</b>	<b>≥ 80</b>	<b>≥ 170</b>	<b>≥ 15</b>	<b>≥ 5</b>

\*\*\*) 3mm double-notched-impact-strength

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.

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