

Welcome at OKULEN®



Overview typical measurement devices



**Sand-Slurry-Test-
Abrasion Resistance**



**Notched Impact Strength-
Charpy method**



Tensile Strength



Density



Static and Dynamic Friction



Melt Flow Rate



Moister



Shore-Hardness



Melting Point - DSC

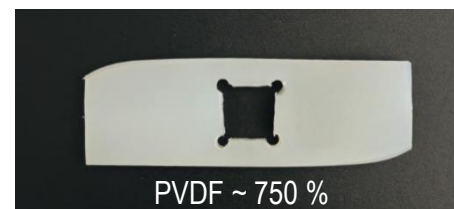
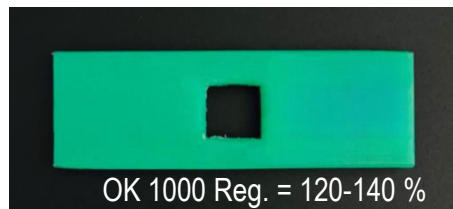
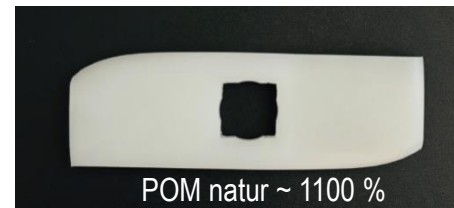
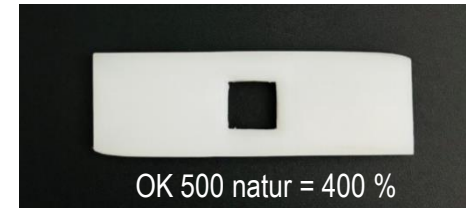
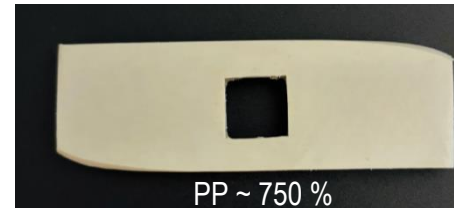
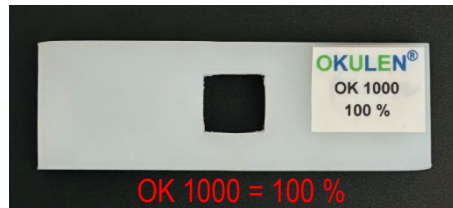


Ball Indentation Hardness

Abrasion resistance (acc. to DIN-EN-ISO 15527)



➔ Specimen-Dimensions:
76,2 mm x 25,4 mm x 6,35 mm



Abrasion resistance (acc. to DIN-EN-ISO 15527)

UHMW-PE plastic materials have a high abrasion resistance. In order to measure this behaviour against wear for the various PE types, several methods have been developed.

There are some methods to differentiate the abrasion values and these methods require relative costly testing instruments.

OKULEN[®] uses the sand-slurry-abrasion test related to DIN-EN-ISO-15527.

The measuring instrument is a precision scale in milligrams and gives a good accuracy of 95% for repeat.

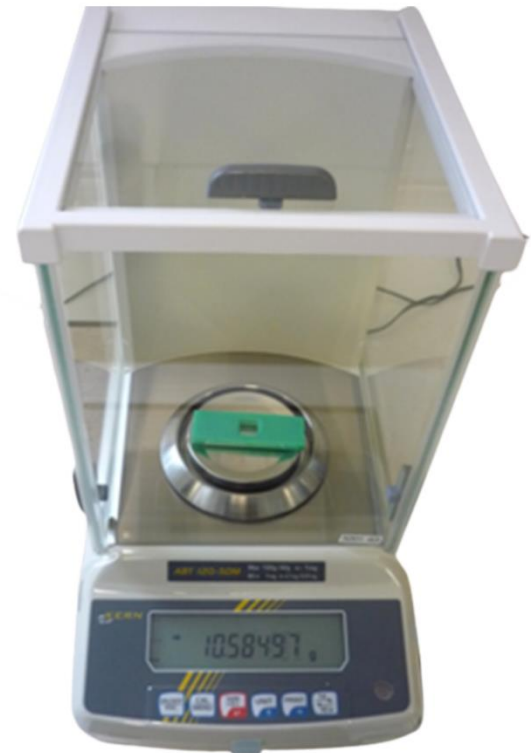
The method does not refer to specific applications, but provides a comparison of the abrasion behavior under standardized test parameters.

The test specimens (76.2 x 25.4 x 6.35 mm) are extracted from a pressed sheet.

The reference specimens made of GUR 4120 (OK 1000) from Celanese and the test specimens are produced under the same conditions.

On the scale you see a test specimen. All test specimens and reference specimens are weighed exactly to a thousandth of a gram before and after the test.

The fine scale is necessary to obtain accurate values, as the weight loss in this test is approximately less than one gram.



Abrasion resistance (acc. to DIN-EN-ISO 15527)

The pots are filled with a quartz-sand/water-mixture.

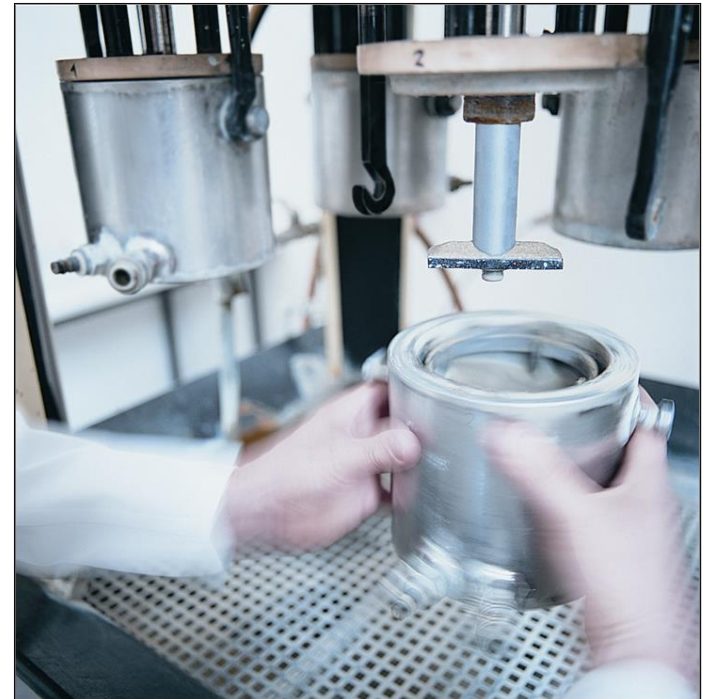
For each test we use new sand with a grain of 0.2 mm - 1.0 mm.

In each pot there are 4 centrifugal breaks which produce turbulences in the pot and prevent a deposition of sand in the bottom.

The specimens are fixed onto the shafts, the pots are put into the instrument and slowly they are put into position. The cooling of the jackets is activated and the driving motor starts.

After the run the specimens are cleaned and dried. The second weighing now shows the loss in milligrams. This abrasion is put into relation to the loss on the reference samples and then we find the percentage of abrasion of the specimens.

The abrasion of the reference samples out of GUR 4120 (OKULEN 1000) is fixed with 100 %.



OKULEN® Technische Kunststoffe

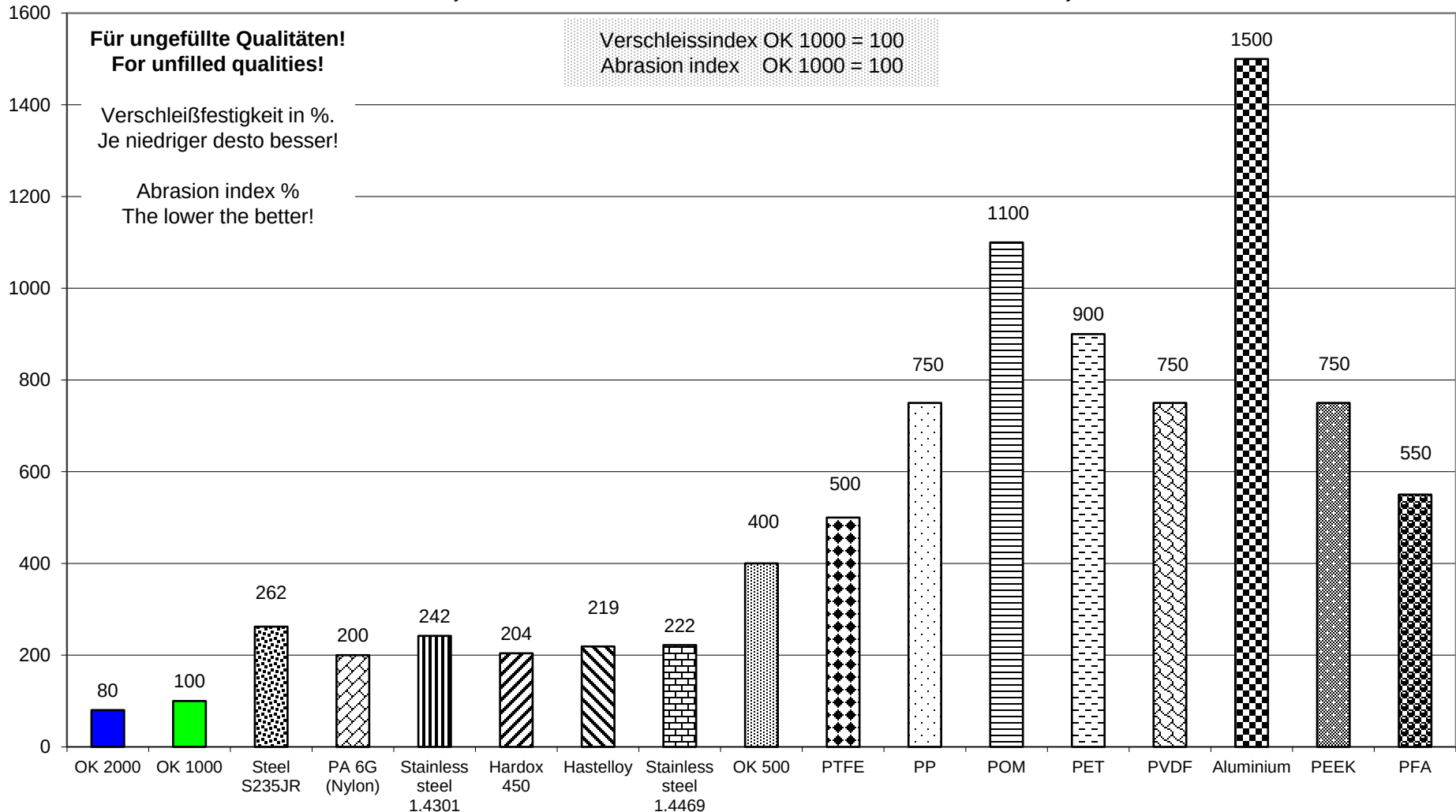
Engineering Plastics

Eigenschaften von UHMW-PE im Vergleich zu anderen Materialien

rel. Volumenverschleiss nach dem Sand-Slurry-Verfahren, DIN-EN-ISO 15527

Properties of UHMW-PE compared to other materials

Abrasion Sand-Slurry-Test, acc. to DIN-EN-ISO 15527



OKULEN[®] Technische Kunststoffe *Engineering Plastics*

We strive to produce the best possible products tailored to our customers' needs.



How can we help you?

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