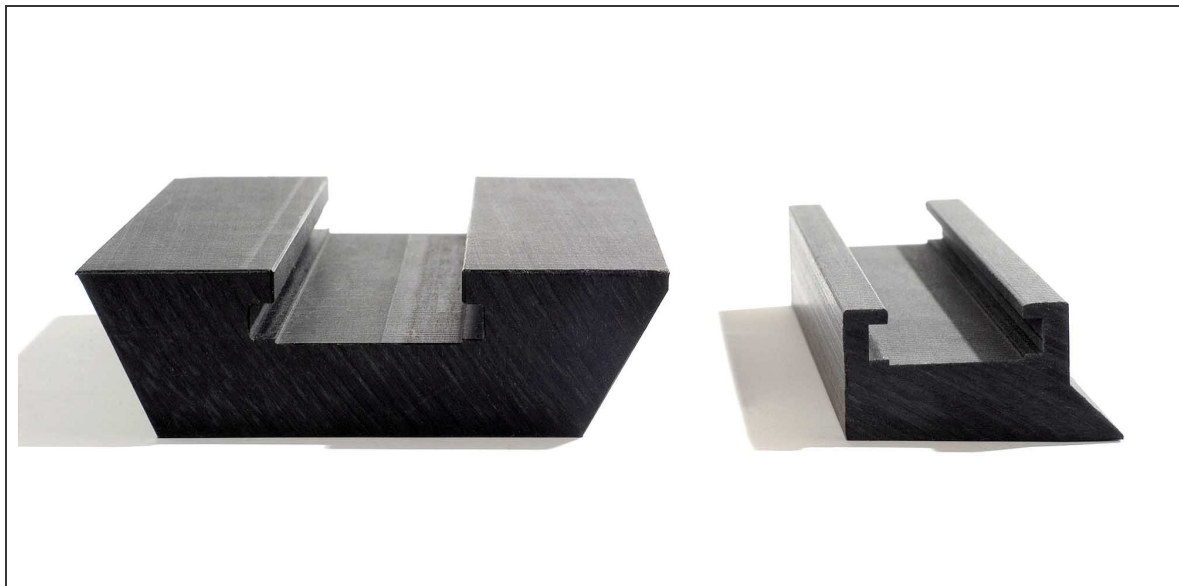


## Product information

### Wefapress PS 1005

PS 1005 is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 7 to 9 million g/mol. By using specially selected carbon black and graphite materials as well as the influence of micro-crystal balls it is possible to enhance and customise the properties of the PS 1000<sup>®</sup> material. The percentage of additives is higher when compared to PS 1004<sup>®</sup>. The characteristics of PS 1005 are as follows:

- high mechanical load bearing capacity
- extremely low wear and good sliding properties
- high bending- and impact strength



|                        |  |
|------------------------|--|
| Standard colours:      | black  |
| Special colours:       | --   |
| Form of delivery:      | sheets, rods <small>(pressed)</small><br><small>(catalogue semi-finished products)</small>   |
| Finished parts:        | on request   |
| Fields of application: | <ul style="list-style-type: none"><li>• paper industry</li><li>• mechanical engineering</li><li>• transport and conveyor systems</li><li>• agriculture</li><li>• filter industry</li></ul> |

## Technical Data Sheet

|   |                   |                     |                      |
|---|-------------------|---------------------|----------------------|
| Material designation                    | <b>PS 1005</b>    |                     |                      |
| Raw material                            | PE-UHMW           |                     |                      |
| Material colour(s)                      | black             |                     |                      |
| <b>Properties</b>                       | Unit              | Test method         | Value                |
| Molecular weight (average molar mass)   | g/mol             |                     | approx. 7 - 9 mill.  |
| <b>Mechanical properties</b>            |                   |                     |                      |
| Density                                 | g/cm <sup>3</sup> | DIN 53479           | 0,99                 |
| Tensile strength                        | N/mm <sup>2</sup> | DIN 53455           | 23                   |
| Shore d hardness, 15s                   | d scale           | DIN 53505           | 64 – 69              |
| Ball indentation hardness, 30s          | N/mm <sup>2</sup> | DIN ISO 2039 part 1 | 48                   |
| Ultimate tensile strength               | N/mm <sup>2</sup> | DIN 53455           | 35                   |
| Elongation at break                     | %                 | DIN ISO / R 527     | 350                  |
| Modulus of elasticity                   | N/mm <sup>2</sup> | DIN 53457           | 700                  |
| Notched impact strength (Charpy)        | kJ/m <sup>2</sup> | DIN 53453           | >80 –110             |
| Abrasion                                | %                 | Sand slurry method  | ~70                  |
| Coefficient of friction                 |                   |                     | 0.09                 |
| <b>Thermal properties</b>               |                   |                     |                      |
| Dimensional stability under heat        | °C                | DIN 53461           | 47                   |
| Vicat softening temperature             | °C                | DIN 53460           | 79                   |
| Crystallite melting range               | °C                | DTA                 | 130 ~135             |
| Thermal conductivity at 23°C            | W/m * K           | DIN 52612           | 0.42                 |
| Specific heat at 23°C                   | kg/kJ * K         |                     | 1.8                  |
| Coefficient of linear expansion at 23°C | K <sup>-1</sup>   | DIN 53752           | 1 x 10 <sup>-4</sup> |
| Application temperature (min.)          | °C                |                     | -200                 |
| Application temperature (constant)      | °C                |                     | 80                   |
| Application temperature (max.)          | °C                |                     | 90                   |
| <b>Electrical properties</b>            |                   |                     |                      |
| Dielectric strength                     | kV/mm             | DIN 53481           | 45                   |

Notes for the user:

Data sheet specifications are made to our today's knowledge. This information does not mean that certain properties are agreed upon or assured. Whether or not a material is suitable for a given application is the user's decision. All specifications are subject to change.

Vreden, October 2005