

## PTFE virgin

### Mechanical, Physical and Thermal Properties

| properties                       | condition      | standard           | unit                               | unit  | unit                               |           |
|----------------------------------|----------------|--------------------|------------------------------------|-------|------------------------------------|-----------|
| colour                           |                |                    |                                    | white | white                              |           |
| density/specific gravity         | 23 °C          | DIN 53479          | kg/m <sup>3</sup>                  | 2150  | g/cm <sup>3</sup>                  | 2,15      |
| hardness                         | 23 °C          | ISO 868            | Shore D                            | 55 ±3 | Shore D                            | 55 ±3     |
| ball indentation hardness 23 °C  |                | DIN 53456 H 135/30 | MPa                                | 23 ±5 | psi                                | 3335 ±725 |
| tensile strength                 | 23 °C          | ASTM D 4745-79     | MPa                                | ≥ 27  | psi                                | ≥ 3916    |
| elongation at break              | 23 °C          | ASTM D 4745-79     | %                                  | ≥ 250 | %                                  | ≥ 250     |
| compressive strength             | 23 °C          | DIN 53455          | MPa                                | ≥4    | psi                                | ≥ 580     |
| thermal conductivity             |                | DIN 52612          | $\frac{J * 10^3}{m*h*K}$           | 0,8   | $\frac{J * 10^3}{m*h*K}$           | 0,8       |
| coefficient of thermal expansion | 25 °C - 200 °C |                    | K <sup>-1</sup> * 10 <sup>-5</sup> | 19    | K <sup>-1</sup> * 10 <sup>-5</sup> | 19        |
| coefficient of friction *        | 23 °C          |                    |                                    | 0,08  |                                    | 0,08      |
| minimum service temperature      |                |                    | °C                                 | -200  | °F                                 | -328      |
| maximum service temperature      |                |                    | °C                                 | 260   | °F                                 | 500       |
| young's modulus                  | 23 °C          | DIN 53457          | MPa                                | 540   | psi                                | 78500     |

\* coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

## Chemical Properties

Filled PTFE

Resistant to almost all chemicals

Not resistant to halogenides, elemental fluorine, CF<sub>3</sub>, molten alkali metals

Foodstuff applications                      FDA approval