

**PTFE GRAPHITE**

15 % graphite + 85 % virgin PTFE

**Mechanical, Physical and Thermal Properties**

| properties                       | condition      | standard          | unit                               | unit      | unit                                      |
|----------------------------------|----------------|-------------------|------------------------------------|-----------|---|
| colour                           |                |                   |                                    | dark grey | dark grey                                 |
| density/specific gravity         | 23 °C          | DIN 53479         | kg/m <sup>3</sup>                  | 2130      | g/cm <sup>3</sup> 2,13                    |
| hardness                         | 23 °C          | ISO 868           | Shore D                            | 60 ±3     | Shore D 60 ±3                             |
| ball indentation hardness 23 °C  |                | DIN 53456 H135/30 | MPa                                | 26 ±5     | psi 3770 ±725                             |
| tensile strength                 | 23 °C          | ASTM D 4745-79    | MPa                                | ≥ 16      | psi ≥ 2320                                |
| elongation at break              | 23 °C          | ASTM D 4745-79    | %                                  | ≥ 140     | % ≥ 140                                   |
| compressive strength             | 23 °C          | DIN 53455         | MPa                                |           | psi                                       |
| thermal conductivity             |                | DIN 52612         | $\frac{J * 10^3}{m * h * K}$       | ≥ 4,0     | $\frac{J * 10^3}{m * h * K}$ ≥ 4,0        |
| coefficient of thermal expansion | 25 °C - 200 °C |                   | K <sup>-1</sup> * 10 <sup>-5</sup> | ≥ 11,2    | K <sup>-1</sup> * 10 <sup>-5</sup> ≥ 11,2 |
| coefficient of friction *        | 23 °C          |                   |                                    | ≥ 0,14    | ≥ 0,14                                    |
| minimum service temperature      |                |                   | °C                                 | -200      | °F -328                                   |
| maximum service temperature      |                |                   | °C                                 | 260       | °F 500                                    |
| young's modulus                  | 23 °C          | DIN 53457         | MPa                                |           | psi                                       |

\* 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 -