

## PTFE CuSn60

Polytetrafluoroethylene (PTFE + 60% bronze)

**PTFE**, reinforced with bronze increases hardness, compressive strength, thermal and electrical conductivity.

| Properties                                 | Test method     | Unit                          | Value             |
|--|-----------------|-------------------------------|-------------------|
| <b>Mechanical</b>                          |                 |                               |                   |
| Tensile strength                           | D 4894          | MPa                           | ≥ 15              |
| Elongation at break                        | D 4894          | %                             | ≥ 100             |
| Modulus of elasticity (tensile)            | D 638           | MPa                           | -                 |
| Modulus of elasticity (flexural)           | D 790           | MPa                           | -                 |
| Notch impact strength                      | D 256           | J / m                         | -                 |
| Flexural strength                          | D 790           | MPa                           | -                 |
| Compressive strength (1% strain)           | D 695           | MPa                           | 10                |
| Deformation under load                     | D 621           | D                             | ≥ 6               |
| Permanent deformation                      | D 621           | M                             | ≥ 2,5             |
| Shore hardness                             | D 2240          | MPa                           | ≥ 62              |
| <b>Thermal</b>                             |                 |                               |                   |
| Melting temperature                        | -               | °C                            | -                 |
| Glass transition temperature (Tg)          | -               | °C                            | -                 |
| Thermal conductivity                       | C 177           | W / (m * K)                   | -                 |
| Coef. of linear thermal expansion          | ASTM D696       | 10 <sup>-5</sup> (mm/mm) / °C | ≥ 8               |
| Long term service temperature              | -               | °C                            | -                 |
| Short term service temperature             | -               | °C                            | -                 |
| Heat deflection temperature                | DIN 75 HDT/A    | °C                            | -                 |
| Flammability                               | UL 94           | -                             | -                 |
| Flammability (oxygen index)                | -               | %                             | -                 |
| <b>Electrical</b>                          |                 |                               |                   |
| Dielectric constant at 1MHz                | D150            | 10 <sup>6</sup> Hz            | -                 |
| Dissipation factor at 1MHz                 | D150            | 10 <sup>6</sup> Hz            | -                 |
| Volume resistivity                         | D257            | Ω * cm                        | -                 |
| Surface resistivity                        | D257            | Ω                             | -                 |
| Dielectric strength                        | D149            | kV / mm                       | -                 |
| Tracking resistance (CTI)                  | -               | V                             | -                 |
| <b>Additional Data</b>                     |                 |                               |                   |
| Density                                    | D 792           | g / cm <sup>3</sup>           | 3,75 - 3,93       |
| Water absorption (saturation)              | D 570           | %                             | -                 |
| Humidity absorption (saturation)           | D 570           | %                             | -                 |
| Food compliance                            | EEC             | -                             | -                 |
| Food compliance                            | FDA             | -                             | -                 |
| Coefficient of Friction (dynamic → static) | D 1894          | -                             | 0,13              |
| Shapes                                     | Rod (10 → 50 Ø) | -                             | Tube (on request) |
| Colour                                     | Brown           |                               |                   |

- **Bronze filled PTFE** provides dimensional stability, wear resistance and lowers creep.

*The conditioned material values stated are average test results. The data provides information about our products and offers a guide for material selection. This does not provide an assurance of specific properties or the products suitability for a particular application.*

*It solely remains the customers responsibility to test and assess the suitability and compatibility of Plastim's products for it's intended applications, processes and uses. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product.*

- \* Long term service temperature are based on the thermal ageing of the polymer by oxidation, resulting in a decrease in mechanical capabilities
- \* Short term service temperature only applies to very low mechanical stress for a very limited time only.

*Properties can vary depending on the raw shape selected and the degree of crystallisation. The actual property values of a finished product may differ from the indicated values stated.*