



**Engineering  
Plastics**

**QUANDA**

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# Typical Properties Data Sheet

The Supplier of Engineering Plastics  
Rods, Sheets, Tubes, Profiles and Machining Parts

## Saferlon® PTFE Properties Data Sheet

### ① Raw material description

|                        |                                                                                                                                                                                           |                          |  |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--|
| <b>Standard Grade:</b> |                                                                                                                                                                                           | <b>Appearance color:</b> |  |
| <b>Applications:</b>   | Processing materials,rod,sheet,board,strip,tube.Used in electrical industry,and the insulation layer, corrosion resistance, war-resistance material in spaceflight, electronics, computer |                          |  |
| <b>Remarks:</b>        | Charactor:With superior high and low temperature resistance,corrosion resistance ,weatherability,high lubrication,inadhesion,nonhazardous,dielectrical property                           |                          |  |

### ② Raw material technical datasheet

| Property item                             | Test conditions    | Testing method | Testing data       | Unit                               |
|-------------------------------------------|--------------------|----------------|--------------------|------------------------------------|
| <b>I.Physical property</b>                |                    |                |                    |                                    |
| Density                                   | ---                | ASTM D792      | 2.14~2.2           | g/cm <sup>3</sup>                  |
| Shrinkage                                 | ---                | ASTM D955      | 3.1~5              | %                                  |
| Absorption                                | 24h dipping (23°C) | ASTM D570      | <0.01              | %                                  |
| Flammability class                        | ---                | UL94           | V-0                | Class                              |
| <b>II .Mechanical property</b>            |                    |                |                    |                                    |
| Impact strength(No Chipped)               | ---                | ASTM D256      | constant           | kJ/m <sup>2</sup>                  |
| Impact strength(Chipped)                  | ---                | ASTM D256      | 24. 6~31. 6        | kgf•cm / cm <sup>2</sup>           |
| Tensile strength                          | ---                | ASTM D638      | 14~48              | MPa                                |
| Compressive strength                      | ---                | ASTM D695      | 24                 | MPa                                |
| Modulus of elasticity in compression      | ---                | ASTM D695      | 414~621            | MPa                                |
| Elongation at break                       | ---                | ASTM D638      | 200~450            | %                                  |
| Hardness- Shore D                         | hardmeter          | ASTM D638      | 50~65              | D                                  |
| Cantilever beam tensile strength(Chipped) | ---                | ASTM D256      | 6.3                | kJ/m <sup>2</sup>                  |
| Coefficient of friction                   | rub with steel     | ASTM D1894     | 0.02               | ---                                |
| <b>III.Thermal property</b>               |                    |                |                    |                                    |
| Thermal deformation temperature           | 0.46MPa            | ASTM D648      | 121                | °C                                 |
| Thermal deformation temperature           | 1.82MPa            | ASTM D648      | 55.6               | °C                                 |
| Max. working temperature(interrupt)       | ---                | UL 749B        | 288                | °C                                 |
| Max. working temperature(long time)       | 20000h             | UL 749B        | 260                | °C                                 |
| Melting point                             | ---                | ASTM D2133     | 327                | °C                                 |
| Brittle temperature                       | ---                | ASTM D746      | -268               | °C                                 |
| Thermal conductivity                      | 23°C               | ASTM C177      | 6                  | 10-4 cal/M•s°C                     |
| Coefficient linear thermal expansion      | ---                | ASTM D696      | >11.6              | 10 <sup>-5</sup> /°C <sup>-1</sup> |
| <b>IV .Electrical property</b>            |                    |                |                    |                                    |
| Dielectric constant                       | ---                | ASTM D150      | 2.1                | 10 <sup>6</sup> Hz                 |
| Dielectric loss angle tangent             | ---                | ASTM D150      | 2×10 <sup>-4</sup> | 10 <sup>6</sup> Hz                 |

|                                |                   |           |                   |       |
|--------------------------------|-------------------|-----------|-------------------|-------|
| <b>Dielectric strength</b>     | 0.254mm thin film | ASTM D149 | >1400             | KV/mm |
| <b>Volume resistivity</b>      | ---               | ASTM D257 | >10 <sup>18</sup> | Ω*cm  |
| <b>Surface resistivity</b>     | ---               | ASTM D257 | >10 <sup>17</sup> | Ω     |
| <b>Electric arc resistance</b> | ---               | ASTM D495 | >300              | Sec   |

**NOTE:** 1 g/cm<sup>3</sup> = 1,000 kg/m<sup>3</sup>, 1 Mpa = 1 N/mm<sup>2</sup>, 1kV/mm = 1 MV/m

**Statement:**  
**NOTE:** The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Quanda will not provide any legally binding guarantee of certain properties, or any suitability.