



**Engineering  
Plastics**

Shenzhen Quanda Plastic Co.,Ltd.  
Web.: www.quandaplastic.com  
Email: info@quandaplastic.com  
Tel:0086-755-28113160



# Typical Properties Data Sheet

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

## Saferlon® FEP Properties Data Sheet

### ① Raw material description

<b>Application:</b>	Processing materials,rod, sheet, board, strip, tube. Used in chemical equipments, pipe, vavel, container, electronics, engineering industry sealing element and bearings, wire paint for defense industry etc.
<b>Remarks:</b>	Charactors: With excellent weather-proof properties, UV resistance, high and low temperature resistance properties.

### ② Raw material technical datasheet

Property item	Test conditions	Testing method	Testing data	Unit
<b>I. Physical property</b>				
Density	---	ASTM D792	2.12~2.17	g/cm <sup>3</sup>
Shrinkage	---	ASTM D955	0.03~0.06	cm/cm
Water absorption	24h, 1/3"t	ASTM D570	<0.00	%
Flammability class	---	UL94	V-0	Class
<b>II .Mechanical property</b>				
Tensile strength	23°C	ASTM D638	19~22	MPa
	-253°C	ASTM D638	167	MPa
Tensile modulus of elasticity	23°C	ASTM D638	343	MPa
	-253°C	ASTM D638	5100	MPa
Compressive strength	1%transformation, 25°C	ASTM D695	5~6	MPa
	-253°C	ASTM D695	251	MPa
Compressive modulus of elasticity	25°C	ASTM D695	414~621	MPa
	-253°C	ASTM D695	7100	MPa
Flexural modulus	26°C	ASTM D790	539~637	MPa
	-253°C	ASTM D790	5400	MPa
Elongation at break	23°C	ASTM D638	250~330	%
Bearing and deformation	100°C 6.8MPa, 24h	ASTM D621	5	%
	25°C 13.7MPa, 25h	ASTM D621	3	%
Hardness-Shore D	Sclerometer	ASTM D2240	55	D
Cantilever beam impact strength (unnotched)	23°C	ASTM D256	unbreak	J/m
	-253°C	ASTM D256	98.1	J/m <sup>2</sup>
Cantilever beam impact strength (notched)	23°C	ASTM D256	unbreak	KJ/m <sup>2</sup>
Coefficient of friction(static state)	rub with steel 0.7MPa 23°C	ASTM D1894	0.08	---
Coefficient of friction(trends)	rub with steel 0.7MPa 0.1m/S 23°C	ASTM D1894	0.35	---
<b>III. Thermal property</b>				
Thermal deformation temperature	0.46MPa	ASTM D648	72	°C
	1.85MPa	ASTM D648	50	°C
Max. working temperature(discontinuous)	---	UL746B	260	°C
Max. working temperature(long time)	20000h	UL746B	200	°C

<b>Melting temperature</b>	---	ASTM D2133	270	°C
<b>Brittle temperature</b>	---	ASTM D746	-268	°C
<b>Specific heat capacity</b>	---	---	1.17	KJ/(kg.K)
<b>Thermal conductivity</b>	23°C	ASTM C177	0.25	W/(cm*K)
<b>Coefficient linear thermal expansion</b>	23~60°C	ASTM D696	(8.3-10.5) *10 <sup>-5</sup>	1/°C

#### IV. Electrical property

<b>Dielectric constant</b>	---	ASTM D150	2.1	10 <sup>6</sup> Hz
<b>Dielectric loss angle tangent</b>	---	ASTM D150	7.0×10 <sup>-4</sup>	10 <sup>6</sup> Hz
<b>Dielectric strength</b>	0.254mm thin film	ASTM D149	>2000	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>Electroc arc resistance</b>	---	ASTM D495	>165	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.