

# Flon-Chem<sup>®</sup>-1000

## 100% PURE VIRGIN P.T.F.E.

Is a polymer of high molecular weight, 100% pure virgin P.T.F.E. (polytetrafluoroethylene), formed by atoms of fluorine and carbon which make it one of the most versatile plastic materials for applications barred to other materials.

### TYPICAL PROPERTIES:

**FLON-CHEM<sup>®</sup>-1000** is preferred for parts and components requiring very good mechanical properties. It offers an excellent combination of properties typical of fluoropolymer resins.

**FLON-CHEM-1000** offers excellent resistance to continuous service temperatures – working conditions from -200°C up to 250°C and for limited periods, even to higher temperature.

**FLON-CHEM-1000** offers high inertness towards nearly all known chemicals. Only attacked elemental alkali metals, chlorine trifluoride and elemental fluorine at high temperature and pressures might affect properties.

**FLON-CHEM-1000** offers insoluble properties in all solvents up to temperatures as high as 300° C.

Certain highly fluorinated oils only swell and dissolve PTFE at temperatures close to the crystalline melting Point.



### TYPICAL APPLICATION:

Thanks to the excellent chemical resistance and the high and low temperature resistance FLON-CHEM<sup>®</sup>-1000 is extremely suitable to be used as sealing elements and gaskets where high performance is required

### FDA COMPLIANCE:

**FLON-CHEM<sup>®</sup>-1000** complies with FDA Regulation 21 CFR 177.1550 for use in contact with food.

PROPERTY	TEST METHOD	UNITS	VALUE
Color			White
Specific gravity	ASTM D792	gr/cm <sup>3</sup>	2,16 +/- 0,03
Water absorption	ASTM D570	%	< 0,01
Flamability	UL 94		V-0
Tensile Strength	ASTM D4745	MPa	> 20
Elongation	ASTM D4745	%	> 200
Hardness	ASTM D2240	Shore D	> 54
Wear Coefficient		cm <sup>3</sup> min 10 <sup>-8</sup> Kg m h	20000-25000
Ball Hardness	ASTM D785	MPa	> 23
Permanent deformation			
( after 24 hrs. Relaxation at 23°C)	ASTM D621	%	6 - 7,5
Deformation under load			
( 140 kg/cm <sup>2</sup> for 24 hrs at 23°C )	ASTM D621	%	10 - 13
Coefficient of static friction	ASTM D1894		0,08 - 0,10
Coefficient of dynamic friction	ASTM D1894		0,06 - 0,08
Thermal conductivity	ASTM C177	W/m*K	0,34
Coefficient of linear thermal expansion			
from 25°C to 100° C	ASTM D696	10 <sup>-5</sup> / °C	12 - 15
Volume resistivity	ASTM D257	Ohm cm	10 <sup>18</sup>
Surface resistivity	ASTM D257	Ohm	10 <sup>17</sup>

- Good mechanical properties
- Exceptional temperature resistance
- UV resistance
- Extremely non-adhesive
- Excellent chemical resistance
- Excellent electrical insulating properties.
- High degree of hydrophobicity
- Suitable for food contact
- High limiting oxygen index
- Reduced friction & wear;
- Low friction behavior

All information in this document is based on years of experience in manufacture and use of the discussed products. Since sealing performance in the joint is subject to multiple factors such as mounting method, system parameters, and sealed medium, technical parameters specified herein are of informative nature only and cannot be used as grounds for any claims any special uses of products are subject to consulting with the manufacturer.