Flon-Chem®- 1121

Virgin PTFE "Premium Grade"

is a **Virgin PTFE Premium Grade** classified as **medical grade** according to the standard **USP Class VI** (Unites States Pharmacopea)

TYPICAL PROPERTIES:

FLON-CHEM-1121 is a PTFE Premium Grade preferred for parts and components requiring very good mechanical properties. FLON-CHEM-1121 offers an excellent combination of properties typical of the fluoropolymer resins:

Service Temperature: FLON-CHEM-1121 offers excellent resistance to continuous service temperatures – working conditions from -100° C up to 250° C , and, for limited periods, even to higher temperatures; Product's low temperature resistance allows satisfactory performance down to -200° C.

Chemical resistance: FLON-CHEM-1121 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.

Solvents resistance: FLON-CHEM-1121offers 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.

COMPLIANCE/APPROVALS:

USP Class VI: Unites States Pharmacopea according to USP<87> ed USP<88>

CE Regulations: 1935/2004/CE 1895/2005/CE 10/2011/UE 2023/2006/UE

Italian Legislation: Decreto ministeriale 21/03/1973 DPR 777/82

USA Directives: **FDA**, Food and Drug Administration, department of Health and Human Services, Code of Federal Regulations 21 CFR Ch.1; USA regulations sections 177.1550 (a) (1) and (b) Perfluorocarbon Resins;

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PROPERTIES	TEST METHOD	UNITS	VALUE
Colour			White
Density	ASTM D792	gr/cm3	2,16 +/- 0,3
Water absorption	ASTM D570	%	< 0,01
Flammability	Ul 94		V-0
Tensile Stenght	ASTM D4894	MPa	> 25
Elongation at Break	ASTM D4894	%	> 280
Hardness	ASTM D2240	Shore D	> 54
Compression Modulus 150°C - 20 Mpa 16h WSW	DIN 28090-2	%	35
Compression Stenght at 1% deformation	ASTM D695	MPa	> 4
Permanent deformation (140 Kg/cm2 for 24 h at 23°C)	ASTM D621	%	6 – 7,5
Deformation under load (after 24 h . Relaxation 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	ASTM D696	10 -5 / °C	12 - 15
Dielectric stenght	ASTM D149	kV/mm	> 30

Note : These are typical properties and not used for specification purpose

PRODUCT PROPERTIES:

- Very good mechanical properties
- Exceptional temperature resistance
- UV resistance
- Excellent chemical resistance.
- Extremely non-adhesive
- Excellent electrical insulating properties
- Reduced friction & wear;
  Low friction behaviour
- Suitable for food and Pharmaceutical application
- High degree of hydrophobicity

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