PTFE 101

Color - white

PTFE 101 is a semicrystalline thermoplastic based on polytetrafluoroethylene.

PTFE 101 has a very high chemical resistance almost to any aggressive environment.

Seals made from PTFE 101 are not resistant only to molten alkali metals and elementary fluorine at high temperatures. It is important to remember when applying fluoroplastic seals at low temperatures (pressure), subsidence can occur.

and the lowest friction coefficient among all plastic materials. PTFE 101 has a «non-stick» surface, doesn't absorb moisture and has good electricity properties. It is also important to take into account the plastic flow versus time at insignificant load (cold flow).

Resistance

PTFE 101 is resistant almost to all chemicals, except elementary fluorine and molten alkali metals. PTFE has the lowest resistance to radiation among all plastic materials.

Application

PTFE 101 can be used for back-up rings, chevron type seals, O-rings, rotary seals, etc. PTFE 101 is primarily used in cases where due to thermal and chemical load there is no possible alternative decision, i.e. where non-stick surface or low friction coefficient are required. In seals technology this material is mainly used in cases with uncritical approach to cold flow.

The dynamic application in water is not recommended, in order to avoid wear increase.

Mainly used

- For hot or cold temperatures
- For sliding and back-up elements
- For rotating seals
- O-rings
- Structural part for chemical and electrical industries.

PTFE 101 Material Data Sheet

Properties	Value	Unit	Standard
Hardness	≥51	Sh D	ASTM D2240
Density	2,14 - 2,18	g/cm^3	ASTM D792
Tensile strength	≥30	N/mm^2	ISO 12086 ISO 527
Elongation at break	≥300	%	ISO 12086 ISO 527
Compressive strength at 1% deformation	4 - 5	N/mm^2	ASTM D695
Deformation under load at room temperature 24 hours at 13,7 N/mm^2	≤17	%	ASTM D621
Permanent deformation as above after 24 hours of rest at room temperature	≤9	%	ASTM D621
Deformation under load at 260°C after 24 hours at 41 N/mm^2	≤32	%	ASTM D621
Permanent deformation as above after 24 hours of rest at room temperature	≤19	%	ASTM D621
Impact strength Izod	153	J/m^2	ASTM D256
Coefficient of Linear Expansion (25° - 100°C)	12 - 13	10^{-5}(mm/mm)/ °C	ASTM D696
Min. service temperature	-200	°C	
Max. service temperature	+260	°C	