Mill Test Certificate of PTFE Rod, Sheet and Tube

PTFE Rods, Sheets and Tube

Exploitation. Working temperatures –269°C … +260°C, upper range is limited not by losing of chemical resistance but by decreasing of mechanical properties. Heating above +327°C causes melting, but the polymer keeps its solid state up to the temperature +415°C.

Technical properties

Physical Properties	Value
Density, g/cm ^{3}	2.14 … 2.26
Heat capacity, cal/g · °C	0.25
Coefficient of linear growth 1×10 -5/°C	8 … 25
Heat conductivity, ccal/m×hour·°C	0.2
Temperature, °C	–120
Melting temperature, °C	327
Minimum working temperature, °C	–269
Maximum working temperature, °C	260
Water absorption during 24 hours, %	0
Heat endurance, °C	110
Mechanical Properties	
Ultimate strength at tension, kgf/cm^2	200 … 300
Break elongation - relative - residual	300 … 350 350 … 500 250 … 350
Ultimate strength at pressing, kg/cm^2	120
Modulus of elasticity at pressing, kg/cm^2	7000
Bending strength, kgf/cm^2	110 … 140
Modulus of elasticity at bending (at 20°C), kg/cm ^{2}	4700
Specific impact strength, kg/cm^2	> 100
Brinell hardness, kg/mm^2	3 … 4
Constant of friction by steel	0.2
Quality of mechanical treatment	the best
Chemical Properties	
Decomposition temperature, °C	> 415
Weight loss during 5 hours, %	0,2 (at 420°C during 3 hours)
Inflammability	not burn
Atmosphere resistance	the best
Acid resistance	resistive
Alkali resistance	resistive

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