

## Mill Test Certificate of PTFE Rod, Sheet and Tube

PTFE Rods, Sheets and Tube

**Exploitation.** Working temperatures  $-269^{\circ}$ C ...  $+260^{\circ}$ C, upper range is limited not by losing of chemical resistance but by decreasing of mechanical properties. Heating above  $+327^{\circ}$ C causes melting, but the polymer keeps its solid state up to the temperature  $+415^{\circ}$ C.

## **Technical properties**

Physical Properties	Value
Density, g/cm <sup>3</sup>	2.14 2.26
Heat capacity, cal/g $\cdot$ °C	0.25
Coefficient of linear growth $1 \times 10 - 5^{\circ}C$	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 <sup>2</sup>	200 300
Break elongation	300 350
- relative	350 500
- residual	250 350
Ultimate strength at pressing, kg/cm <sup>2</sup>	120
Modulus of elasticity at pressing, kg/cm <sup>2</sup>	7000
Bending strength, kgf/cm <sup>2</sup>	110 140
Modulus of elasticity at bending (at 20°C), kg/cm <sup>2</sup>	4700
Specific impact strength, kg/cm <sup>2</sup>	> 100
Brinell hardness, kg/mm <sup>2</sup>	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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