

Material: Polypropylene (homopolymer)

Abbreviation: PP - H



Short description of material:

A partially crystalline thermoplastic with high stiffness, and very good chemical resistance. PP – H has a very low density compared to other plastics and is therefore an excellent insulator. PP- H is not suitable for sliding applications due to its wear rate.

Application examples:

- pump parts
- fitting
- valve bodies
- punching plates
- construction parts in chemical equipments

Colors: natural (white), grey (≈ RAL 7032)

Mechanical values		dry	
Density	ISO 1183	0,91	g/cm ³
Yield Stress	ISO 527	32	MPa
Elongation due to tearing	ISO 527	70	%
Modulus of elasticity resulting from tensile test	ISO 527	1.400	MPa
Modulus of elasticity resulting from bending test	ISO 178	1.400	MPa
Flexural strength	ISO 178	45	MPa
Impact strength ¹⁾	ISO 179	o.B.	kJ/m ²
Notched –bar impact strength	ISO 179	7	kJ/m ²
Ball indentation hardness H _{358/30}	ISO 2039-1	70	MPa
Creep rate stress at 1% elongation ²⁾	DIN 53 444	4	MPa
Sliding friction coefficient against steel (dry running) ³⁾	-----	0,35	-----
Sliding wear agents steel (dry running) ³⁾	-----	11, 0	µm/km
Thermal values			
Melting temperature	ISO 3146	+162	°C
Thermal conductivity	DIN 52612	0, 22	W/ (K·m)
Specific thermal capacity	-----	1,7	J/ (g·k)
Coefficient of linear expansion ⁴⁾	-----	16	10 ⁻⁵ ·K ⁻¹
Operating temperature range (long-term) ⁵⁾	-----	0 / +80	°C
Operating temperature range (short-term) ⁵⁾	-----	+100	°C
Fire behavior	UL 94	HB	-----
Electrical values			
Dielectric constant ⁶⁾	IEC 250	2,25	-----
Dielectric loss factor ⁶⁾	IEC 250	0,00033	----
Specific volume resistance	IEC 93	>10 ¹⁶	Ω· cm
Surface resistance	IEC 93	10 ¹⁴	Ω
Dielectric strength	IEC 243	52	KV/mm
Creep current resistance	IEC112	KA 3c	----
Miscellaneous data			
Moisture absorption in normal climate until saturated	DIN 53 715	< 0, 01	%
Water absorption until saturated	ISO 62	< 0, 01	%

1; Measured with a pendulum impact testing machine 0,1 DIN 51 222

2; Tension resulting in 1% total elongation after 1.000 h

3; against steel, hardened and ground , P = 0,05 MPa,

V=0,6 m/s, t = 60 °C near running surface

4; For a temperature range of + 23 °C to + 60 °C

5; Experience values established with finished part that are not under any stress in heated air, depending on the type and from of heat exposure, short-term = max. 1 h long term = months

6; at 10⁶ Hz

w.b.	=	without breakage
1 MPa	=	1 N/mm ²
1 g/cm ³	=	1.000 kg/m ³
1 kV/mm	=	1 MV/m

Ismat Seals & Hydraulics Inc.

Plot No. E4-05, SAIF Zone,

Sharjah, UAE.

Tel:- 06-5572242.

Fax:- 06-5572243.

URL:- www.ismatseals.com

Email:- sales@ismatseals.com