



Material Datasheet

UHMWPE Lubricated 4150L

PDS nr.: PDS-IM-022, edition: 23/10/2018
Color: Natural (white) / yellow / maroon - red
QC responsible: Ruben Denteneer

Characteristics :

- High wear resistant grade
- Excellent properties in liquid, abrasive media
- Lubricated material to eliminate slip-stick in dynamic applications

Physical, mechanical and thermal properties

Density	ISO 1183	0.94	gr/cm ³
Molecular weight		9.2*10 ⁶	gr/mol
Tensile Strength @ yield	ISO 527	>17	MPa
Elongation @ yield	ISO 527	< 20	%
Elongation @ break	ISO 527	210	%
Tensile modulus	ISO 527	660	MPa
Hardness	Shore D	61	
Deformation under load			
Load 10MPa, 23°C, 1 min after stress removal		4.5	%
Load 10MPa, 23°C, 24hrs after stress removal		2.9	%
Min. continuous operating temperature		-200	°C
Max. continuous operating temperature		80	°C
Linear coefficient of thermal expansion			
23°C – 80°C	DIN53752-A	1.5x10 ⁻⁴	mm/mm/°C
Coefficient of friction			
Dynamic, load 0.5MPa, sliding speed 10m/min		0.16	

Food contact status for the UHMWPE natural (white) and yellow coloured :

The composition of the basic materials mentioned above complies with the compositional requirements of the FDA regulations 21CFR177.1520 - 21CFR177.1550 - 21CFR178.3297 (colorants for polymers)