APSOplast® PE-HMW natural (white)

Engineering Plastic Technology
Technical Data Sheet

Application purpose and characteristics
Environmental and disposal technology, lining technology, cutting boards.
Cutting boards and machine parts used in the foodstuff industry (e.g. meat, fish, poultry, and fruit and vegetable processing, etc.)
Excellent mechanical properties, very wear, cutting and scratch resistant, physiologically safe.

Product description	
Material name, long description	Polyethylen high molecular weight
Material name, short description	PE-HMW
Material Code	PE-HMW 00.001-00
Density	0.96 g/cm³
Color	natural (white)

Mechanical properties	
Modulus of elasticity and tension	Test value: 1200 MPa Test norm: DIN EN ISO 527
Yield stress	Test value: 27 MPa Test norm: DIN EN ISO 527
Elongation at break	Test value: > 50 % Test norm: DIN EN ISO 527
Notch impact strength	Test value: no break - Test norm: DIN EN ISO 179
Shore hardness	Test value: 65 Shore D Test norm: DIN EN ISO 868
Thermal properties	
Min. operating temperature	Test value: -100 °C
Max. operating temperature long term	Test value: 80 °C
Max. operating temperature short term	Test value: 100 °C
Crystalline melting point	Test value: 135 °C Test norm: ISO 11357-3
Coefficient of linear thermal expansion	Test value: 150-230 $10^{-6}K^{-1}$ Test norm: DIN 53752
Heat deflection temperature	Test value: 79 °C Test norm: DIN EN ISO 306 Vicat B
Specific heat capacity	Test value: 1.9 kJ/kg·K Test norm: DIN 52612
Thermal conductivity	Test value: 0.40 W/m·K Test norm: DIN 52612-1

Electrical properties	
Dielectric loss factor	Test value: 0.0002 Test norm: IEC 60250
Dielectric constant	Test value: 2.3 Test norm: IEC 60250
Dielectric strength	Test value: 45 kV/mm Test norm: IEC 60243
Volume resistivity	Test value: > 10^{14} Ohm·cm Test norm: IEC 60093
Surface resistivity	Test value: > 10^{14} Ohm Test norm: IEC 60093
Comparative tracking index	Test value: 600 Test norm: IEC 60112
Other properties	
Flammability	Test value: HB Test norm: UL 94 Test parameter: Thickness 3 mm / 6 mm
Water absorption at saturation	Test value: < 0.01 % Test norm: DIN EN ISO 62

Approvals
- FDA 21 CFR 177.1520
- 10/2011/EU
- 1935/2004/EG
- GMP 2023/2006/EG

EC No.1935:2004

In compliance with **RoHS** and **REACH** directives.