

U321

Ultra High Molecular Weight Polyethylene

Description:

U321 is an Ultra High Molecular Weight Polyethylene with corrosion stabilizer (CS) in powder form with an average molecular weight about 3.5 Million g/mol. The extremely high molecular weight yields several unique properties including high abrasion resistance, impact strength and low coefficient of friction.

Physical Properties:	Method	Unit	Value*
Density	ASTM D792	g/cm ³	0.940
Bulk density	ISO 60/ ASTM D1895	g/cm ³	0.45
Viscosity number (VN)	ISO 1628 part 3	ml/g	1850
Intrinsic viscosity [η]	ISO 1628 part 3	ml/g	1700
Average molecular weight (cal.)	Internal	g/mol	3.5 x 10 ⁶
Average particle size, X50	ASTM D1921	μm	250
Mechanical Properties:	Method	Unit	Value*
Tensile strength at yield	ISO527/ ASTM D638	MPa	≥ 17
Tensile strength at break	ISO527/ ASTM D638	MPa	> 30
Ultimate elongation	ISO527/ ASTM D638	%	> 400
Izod impact strength	ASTM D256	J/m	NB
Hardness	ISO868/ ASTM D2240	Shore D	≥ 60
Thermal Properties:	Method	Unit	Value*
Melting temperature (10°C/min)	ASTM D3418	°C	130 – 135
Vicat softening point (1Kg)	ISO 306/ASTM D1525	°C	128

*Preliminary values are subjected to change in the interest of product development without notification.

Remark: The values presented on the above are typical laboratory average, not to be construed as specifications and may vary within moderate ranges. The applicability or the accuracy of this information or the suitability of our products cannot be guaranteed because the conditions of use on the part or our uses are beyond our control.