

# U311

## Ultra High Molecular Weight Polyethylene

### Description:

U311 is an Ultra High Molecular Weight Polyethylene with corrosion stabilizer (CS) in powder form with an average molecular weight about 3 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	ISO 1183	g/cm <sup>3</sup>	0.93
Bulk density	ISO 60	g/cm <sup>3</sup>	≥ 0.40
Intrinsic viscosity [η]	ISO 1628 – 3	ml/g	1765
Average molecular weight (cal.)	Margolies's Equation	g/mol	3.7 x 10 <sup>6</sup>
Average particle size, X50	Laser Scattering	µm	150
Mechanical Properties:	Method	Unit	Value*
Tensile strength at yield	ISO527	MPa	22
Tensile strength at break	ISO527	MPa	35
Ultimate elongation	ISO527	%	≥ 300
Izod impact strength	ASTM D256	J/m	NB
Hardness	ISO 868	Shore D	65
Thermal Properties:	Method	Unit	Value*
Melting temperature (10°C/min)	ASTM D3418	°C	130 – 135
Vicat softening point (1Kg)	ISO 306	°C	125 – 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 can not be guaranteed because the conditions of use on the part or our uses are beyond our control. For the instructions of handling materials including potential hazards, we recommend to comply with specific Material Safety Data Sheet (MSDS), which can be provided by your technical contact person.