

U711

Ultra High Molecular Weight Polyethylene

Description:

U711 is an Ultra High Molecular Weight Polyethylene with corrosion stabilizer (CS) in powder form with an average molecular weight about 7.5 Million g/mol. The extremely high molecular weight yields several unique properties including high abrasion resistance and low coefficient of friction.

Physical Properties:	Method	Unit	Value*
Density	ISO 1183	g/cm ³	0.925
Bulk Density	ISO 60	g/cm ³	0.42
Viscosity Number (VN)	ISO 1628 – 3	ml/g	3512
Intrinsic Viscosity [η]	ISO 1628 – 3	ml/g	2847
Average Molecular Weight (cal.)	Margolies' Equation	g/mol	7.5 x 10 ⁶
Average Particle Size, X50	Laser Scattering	μm	125
Mechanical Properties:	Method	Unit	Value*
Tensile Strength at Yield	ISO 527	MPa	21
Tensile Strength at Break	ISO 527	MPa	41
Ultimate Elongation	ISO 527	%	300
Abrasion Resistance (U511=100)	ISO 15527	Index	89
Shore D Hardness	ISO 868	-	63
Thermal Properties:	Method	Unit	Value*
Melting Temperature (10°C/min)	ASTM D3418	°C	134

*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.

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This product is offered to you conditioned upon your acceptance without modification of the term, conditions, and notices contained. The information contained in this document refers to the product mentioned herein only. The product can be used only for the application as specified herewith. All represented values are from internal laboratory, measured at production, accurate as of the issuing date, and the value diversity may occur. IRPC shall in no event be liable for the reliability/ accuracy/ completeness of the contained information. It is the customer responsibility to inspect/ test/ trial the product for satisfy as for particular purpose, for the appropriate, safe and legal use, processing and handling of the products. IRPC shall not be liable for any damage or injury arising from the failure to adhere to the safety guidelines and recommendations stated herein or subsequently published by IRPC, abnormal practice, use of products in conjunction with other materials, modification, or any inherent hazards with respect to the product.

Product Description

IRPC High Molecular Weight Polyethylene contains Polyethylene, Chemicals and stabilizers in standard mass percentage.

Storage

IRPC High Molecular Weight Polyethylene shall be stored under dry condition with good ventilation system, protected from heat and direct sunlight. Store at temperature below 50 °C is strongly recommended.

Related Document

Related document of the following product are available upon request (i.e. Certificates, Material Safety Data Sheet, Technical Data Sheet)

Use Limitation / Recycling

The product is ready for use shall limit in specified application. Other modified application are not designed for IRPC High Molecular Weight Polyethylene is recyclable as a clean and homogeneous material. It is not recommended to mix recycling product with other materials. Recycle material may not have material properties equivalently to origin material. You may not copy, distribute, transmit, display, perform, reproduce, publish, license, create derivative works from, transfer, or sell, any information, from the IRPC website or its products, data or information.

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