

GUR[®] 2122 M EP

GUR®

UHMW-PE powder grade: special particle morphology

Samples of the above listed GUR® product are tested according to the requirements described in monograph 3.1.3. of *Ph.Eur.* 10.0 "Polyolefines'. The results of those tests indicated the sampled material was compliant with monograph 3.1.3 of *Ph.Eur.* 10.0.

Please note that the manufacturer or seller of parts and articles made out of the above mentioned products have to take the full responsibility regarding applicable legal requirements.

Product information

Resin Identification Part Marking Code Average molecular weight Average particle size, d50	(PE-UHMW) >(PE-UHMW)< 4.2E6 130	•	ISO 1043 ISO 11469 Margolies' equation laser scattering
Rheological properties			
Melt mass-flow rate Melt mass-flow rate, Temperature Melt mass-flow rate, Load	0.1 190 21.6	-	ISO 1133
Intrinsic viscosity	1900		ISO 307, 1628
Typical mechanical properties			
Tensile modulus Tensile stress at yield, 50mm/min Tensile strain at yield, 50mm/min Tensile stress at 50% strain Tensile stress at break, 50mm/min Nominal strain at break Elongational stress F, 150/10 Charpy double notched impact strength, 23°C Poisson's ratio Shore D hardness, 15s [C]: Calculated	21 13 20 39 400 0.21	MPa MPa	ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 21304-2 ISO 21304-2 ISO 48-4 / ISO 868
Tribological properties			
Wear by sandslurry method (based on GUR 4120=100)	100		
Thermal properties			
Temperature of deflection under load, 1.8 MPa Vicat softening temperature, 50°C/h 50N		°C °C	ISO 75-1/-2 ISO 306
Electrical properties			
Volume resistivity	1E12	Ohm.m	IEC 62631-3-1



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Physical/Other properties

Density	930 kg/m ³	ISO 1183
Bulk density	250 kg/m ³	ISO 60
Characteristics		

Processing	Other Extrusion, Porous Sintering
Delivery form	Powder
Special characteristics	High impact or impact modified, Hydrolysis resistant, Low wear / Low friction, Chemical resistant

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NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design for any use contemplated by a motical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to he lowest that texis. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and

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