(+) 18816996168 Ponciplastics.com



GUR[®] 2122 M

GUR®

UHMW-PE powder grade: special particle morphology

	_													
٠	ט	r	n	п	IC.	t i	ır	۱t	rr	n	2	tı	\cap	n

Resin Identification	(PE-UHMW)	ISO 1043
Part Marking Code	>(PE-UHMW)<	ISO 11469
Average molecular weight	4.2E6 g/r	mol Margolies' equation
Average particle size, d50	130 μm	n laser scattering

Rheological properties

Viscosity number	2100 cm ³ /g	ISO 307, 1628
Intrinsic viscosity	1900	ISO 307, 1628

Typical mechanical properties

Tensile modulus	770	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	21	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	13	%	ISO 527-1/-2
Tensile stress at 50% strain	20	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	39	MPa	ISO 527-1/-2
Nominal strain at break	400	%	ISO 527-1/-2
Elongational stress F, 150/10	0.21	MPa	ISO 21304-2
Charpy double notched impact strength, 23°C		kJ/m ²	ISO 21304-2
Poisson's ratio	0.46 ^[C]		
Shore D hardness, 15s	60		ISO 48-4 / ISO 868

Tribological properties

[C]: Calculated

Wear by sandslurry method (based on GUR 4120=100)

Thermal properties

Temperature of deflection under load, 1.8 MPa	41 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	80 °C	ISO 306

Electrical properties

Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E12 Ohm	IFC 62631-3-2

Physical/Other properties

Density	930 kg/m³	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

Printed: 2025-05-30 Page: 1 of 2

Revised: 2024-08-15 Source: Celanese Materials Database

(+) 18816996168 Ponciplastics.com



GUR[®] 2122 M

GUR®

Additional information

Other extrusion

Preprocessing

Drying of the material is not required due to a negligible moisture content of <0.01 %. However, it is recommended that material with condensed water accumulation be pre-dried at approx. 80-100 $^{\circ}\text{C}$ in a recirculation air drying oven for 2-4 hours. Max. water content 0.1 %

Processing

All ram extruders can be used to produce semi-forms such as rod, tube, board, sheet or profiles.

Temperature Profile: 180-230 °C

Postprocessing

Conditioning is not necessary.

Printed: 2025-05-30 Page: 2 of 2

Revised: 2024-08-15 Source: Celanese Materials Database

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 conditions and environmental exposure. Other than those products expressly identified as medical 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 should not be construed 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 the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, pr

© 2025 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC.