GUR® 5129

Celanese Corporation - Ultra High Molecular Weight Polyethylene

Tuesday, November 5, 2019

General Information

Product Description			
Melt processable UHMW-PE pellet grade			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Forms	• Pellets		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.940	g/cm³	ISO 1183
Apparent (Bulk) Density	0.50	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	< 0.10	g/10 min	ISO 1133
Viscosity Number (Reduced Viscosity)			ISO 1628
--	1600.0	ml/g	
-- [2]	1800.0	ml/g	
Average Molecular Weight [3]	3400000	g/mol	
Average Particle Size - d50 [4]	Pellet		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	131000	psi	ISO 527-2/1B
Tensile Stress (Yield)	3340	psi	ISO 527-2/1B
Tensile Stress (Break)	4930	psi	ISO 527-2/1B
Tensile Stress (50% Strain)	2900	psi	ISO 527-2/1B
Tensile Strain (Yield)	11	%	ISO 527-2/1B
Nominal Tensile Strain at Break	420	%	ISO 527-2/1B
Wear by Sandslurry Method [5]	155		Internal Method
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Double 14°V-Notch Strength (73°F)	66.6	ft·lb/in²	ISO 11542-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	176	°F	ISO 306/B50
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+14	ohms·cm	IEC 60093

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] PE and PP

[3] Margolies' Equation

[4] Laser scattering

[5] based on GUR 4120=100