

## Ultra High Molecular Weight Polyethylene UTEC7542F

### Description:

UTEC7542F is an Ultra High Molecular Weight Polyethylene designed to achieve a unique particle size distribution. It is specifically intended for the battery separator markets, but is also useful for any application requiring either a low percentage of "large" particles or a higher percentage of "fine" particles.

### Applications:

Lead acid battery separators, Synthetic Paper, Porous plastics

### Physical Properties

Characteristics	Method	Units	Values
Intrinsic Viscosity	ASTM D4020	dL/g	32
Average Molecular Weight	Margolies	g/mol	$9.5 \times 10^6$
Density	ASTM D792	g/cm <sup>3</sup>	0.925
Bulk Density	ASTM D1895	g/cm <sup>3</sup>	0.45
Average Particle Size Dp50	Laser Light Scattering	µm	125
Particle Size Dp10	Laser Light Scattering	µm	< 100
Particle Size Dp90	Laser Light Scattering	µm	< 250
Particles > 250 µm	Laser Light Scattering	%	< 4.0
Particles > 300 µm	Laser Light Scattering	%	< 1.0
Melt Temperature	ASTM D3418	°C	133

### Mechanical Properties

Characteristics	Method	Units	Values
Tensile Strength at Yield	ASTM D638, ISO 527	MPa	= 17
Tensile Strength at Break	ASTM D638, ISO 527	MPa	> 30
Ultimate Elongation	ASTM D638	%	> 300

\* Determined with double-notched specimens (14° v-notch on both sides) in accordance with ISO 11542-2.

### Electrical Properties

Characteristics	Method	Units	Values
Volume Resistivity	ASTM D257	ohm.cm	$> 10^{14}$
Surface Resistivity	ASTM D257	ohm	$> 10^{12}$

### Final Remarks

1. It is the sole responsibility of the Client/Purchaser of this Product to verify the suitability of this Product and its use for the intended use and to ensure compliance with legal and regulatory requirements applicable to the final product.
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