



UHMWPE (Ultra High Molecular Weight Polyethylene)

Physical Property	ASTM Test Method	Units	Value
Tensile strength 23°C	D638	MPa	24.55
		psi	3560
Tensile strength -40°C	D638	MPa	~
		psi	~
Elongation at 23°C	D638	%	~
Elongation at break	D638	%	450
Hardness	D785	Shore D	64/67
		Rockwell R	~
Flexural strength	D790	MPa	26.48
		psi	4050
Deformation under load 140Kgf/cm ² at 23°C for 24 hours	D621	%	~
Charpy impact strength at 23°C	D256	J/M	No break
		ftlbs/inch	No break
Charpy impact strength at -40°C	D256	J/M	~
		ftlbs/inch	~
Modulus of elasticity	D638	MPa	785
		psi	113786
Compressive strength	D695	MPa	~
		psi	~
Compressive yield strength	D695	MPa	~
		psi	~
Linear thermal expansion coefficient 30-100°C	E831	mm/mm/°C	2.0 x 10 ⁻⁴
Melt point	D3418	°C	137
Heat distortion temperature °C	D648	264 psi	~
		66 psi	95
Service temperature (short term)	D570	°C	~
Service temperature (long term)	D570	°C	~
Dielectric strength	D149	Kv/mm	>28
Specific gravity	D792	g/cm ³	0.94
Water absorption 24 hrs	D570	%	Water repellent
Water absorption saturation	D570	%	Water repellent
Flammability	UL 94	Burn rate	HB

1. The test figures stated are typical values and their aim is to assist the specifier in material selection. They are not intended to represent exact specifications.
2. ~ denotes no data available at the time of publication. Please contact Devol for further information.
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