



Rhondama Material Data Sheets for Manufactured Parts

UHMW-PE

Polyethylene of ultra high molecular weight

FDA APPROVED

Excellent chemical properties, Good corrosion resistance, Good sliding and antiadhesive behaviour, High resistance to abrasive wear, Excellent izod impact strength / high resilience at shock and impact stress

Resistant against

Resists corrosive chemicals, weatherproof, does not absorb water, resistant to abrasive wear, good oxidation resistance

Applicable for

Food preparation equipment, wearing parts, Mechanical bearings

Mechanical, Physical & Thermal Properties

Properties	Condition	Standard	Unit	Value	Unit	value
density/specific gravity	23 °C	DIN 53479	kg/m ³	930	g/cm ³	0,93
hardness	23 °C	ISO 868	Shore D	61 ±3	Shore D	61 ±3
ball indentation hardness	23 °C	DIN 53456 H	MPa	≥ 36	psi	≥ 5200
		135/30				
tensile strength	23 °C	ASTM D 4745-79	MPa	≥ 40	psi	≥ 5800
elongation at break	23 °C	ASTM D 4745-79	%	≥ 50	%	≥ 50
izod impact strength	23 °C	ISO 180 / 1A	kJ/m ²	≥ 130		
coefficient of thermal expansion	25 °C - 200 °C		K-1 * 10-5	15	K-1 * 10-5	15
coefficient of friction *	23 °C		μ	0,25	μ	0,25
minimum service temp			°C	-200	°F	-328
maximum service temp			°C	80	°F	176

* coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

