

# RHONDAMA LIMITED UHMWPE

## UHMW-PE Hardness 61° Shore D Natural

Polyethylene of ultra high molecular weight

---

### Mechanical, physical and thermal properties

Properties	Condition	Standard	Unit			
Colour				Natural		Natural
Density/specific gravity	23°C	DIN 53479	Kg/m <sup>3</sup>	930	g/cm <sup>3</sup>	0,93
Hardness	23°C	ISO 868	Shore D	61	Shore D	61
Ball indentation hardness	23°C	DIN 53456 H135/30	MPa	36	Psi	5200
Tensile strength	23°C	ASTM D 4745-79	MPa	40	Psi	5800
Elongation at break	23°C	ASTM D 4745-79	%	350	%	350
Thermal conductivity	23°C	DIN 52612	$\frac{J \times 10^3}{m \times h \times K}$	0,45	$\frac{J \times 10^3}{m \times h \times K}$	0,45
Coefficient of thermal expansion	23°C-200°C		$K^{-1} \times 10^{-5}$	15	$K^{-1} \times 10^{-5}$	15
Coefficient of friction	*		$\mu$	0,25	$\mu$	0,25
Minimum service temperature			°C	-200	°F	-328
Maximum service temperature			°C	80	°F	176
Izod impact strength		ISO 180/1A	Kj/m <sup>2</sup>	130		
Young's modulus		DIN 53457	MPa	680	Psi	98000

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

### Chemical Properties

High resistance to abrasive wear

Good oxidation resistance

Good sliding and antiadhesive behaviour

Excellent izod impact strength/high resilience at shock and impact stress

Excellent chemical properties; generally recognised as safe for foodstuff applications