

## HPU

Mechanical, Physical and Thermal Properties

thermoplastic polyurethane with resistance to hydrolysis

properties	condition	standard	unit	unit	unit	unit
colour				red		red
hardness	23°C	ISO 868	shore A	95 ± 2	shore A	95 ± 2
hardness	23°C	ISO 868	shore D	48 ± 3	shore D	48 ± 3
modulus 100%	23°C	DIN 53 504	MPa	≥ 15	psi	≥ 2175
modulus 300 %	23°C	DIN 53 504	MPa	≥ 28	psi	≥ 4160
tensile strength	23°C	DIN 53 504	MPa	≥ 50	psi	≥ 7250
elongation at break	23°C	DIN 53 504	%	≥ 350	%	≥ 350
tear strength	23°C	DIN ISO 34-1	kN/m	≥ 110	lbf/inch	≥ 570
spec. gravity	23°C	ISO 1183	kg/m <sup>3</sup>	1200	g/cm <sup>3</sup>	1,2
abrasion	23°C	DIN 53 516	mm <sup>3</sup>	17	mm <sup>3</sup>	17
compression set	*	ISO 815	%	≤ 27	%	≤ 27
compression set	**	ISO 815	%	≤ 33	%	≤ 33
minimum service temperature			°C	-20	°F	-4
maximum service temperature			°C	115	°F	240

\* 24h 70°C 25% def.

\*\* 24h 100°C 25% def.

## Chemical Properties

Copolymer, based on aromatic isocyanate and diols

Resistant to oil, hot water, hot air, ozone, synthetic and native esters

Not resistant to conc. acids, conc. lyes, conc. alcohols and aromatic solvents

Foodstuff approval: German Regulations on Commodities Bedarfsgegenständeverordnung)

The Council Directive 2002/72/EC (European Community)

FDA-approved compound available