



**HPU  
FOOD GRADE MATERIAL**

## Design Description

HPU is a MDI polyurethane. It has good values for tensile strength, elongation at break and tear strength. It also has a very low compression set. HPU is Hydrolysis resistant, UV resistant and has good mineral oil compatibility as well as good resistance to ozone attack and weathering. Its excellent wear resistance, high elasticity, high dynamic resistance as well as low permeability are other advantages. It is FDA certified. This material is injection molded and also casted available.

### Features

- Outstanding toughness & abrasion for high pressure applications
- Mineral oil compatibility is good
- Good resistance to ozone attack & weathering

Properties	Standard	Unit	Value
Hardness	DIN 53505	Shore A	95 ±2
Hardness	DIN 53505	Shore D	46 ±2
Density	DIN 53479	g/cm <sup>3</sup>	1.2
Tensile strength	DIN 53504	N/mm <sup>2</sup>	31
Elongation at break	DIN 53504	%	400
Stress ratio 100%	DIN 53504	N/mm <sup>2</sup>	17
Stress ratio 300%	DIN 53504	N/mm <sup>2</sup>	38
Compression set 20 °C/24h	DIN 53517	%	10
Compression set 70 °C/70h	DIN 53517	%	20
Tear strength	DIN 53515	N/mm	130
Elastic recovery	DIN 53512	%	26
Abrasion	DIN 53516	Mg loss	45
Minimum application temperature		°C	-50
Maximum application temperature		°C	100
Elongation at break after 2000h			440
Storage in distilled water at 95 °C			440
Swell in water		%	0.3-0.4 max