

SH-Pur

Color – grey

SH-Pur is a hydrolysis resistant thermoplastic polyurethane elastomer (TPU). This material is the further development and modernising of material H-Pur, it still perfectly works in hot water (natural and sea) based, flame retardant hydraulic fluids (HFA, HFB), biologically degradable fluids (bio-oils), mineral oils., etc. SH-Pur is modified by introduction of special combinations of grease lubricants, therefore the seals made out of this material, can ensure much easier sliding with extremely low coefficient of friction and insignificant heat.

SH-Pur is highly resistant to ozone, weather impact and temperatures. As well as H-Pur, this material is very recommended for usage in tropical regions. Swelling in mineral oils is low. SH-Pur has the same high resistance to radiation exposure and gas permeability as H-Pur.

Resistance

Good resistance	Average resistance	Low resistance
Hydraulic fluids based on mineral oil	Fire-resistant fluids of type HFC (water glycol mixture)	Aromatic hydrocarbons
Biologically degradable hydraulic fluids	Some additives for power can have destructive effect (e.g. fungicides)	Chlorinated hydrocarbons (dichloromethane, trichloromethane)
Fire-resistant pressure fluids HFA and HFB	Ethanol	Ketones and glycols
Mineral oils and grease (certain additives can have destructive effects)	Non-ethanol fuels (except premium blend petrol and unleaded fuels)	Break fluids, based on glycol
Silicone oils and grease	–	Hot steam exceeding +100°C
Aliphatic hydrocarbons (e.g. propane, butane)	–	Concentrated acids and basis
Hot water and sea water up to +90°C	–	–
Diluted acids and basis	–	–

Application

SH-Pur is used as alternative to material «Domestic» (NBR+fabric) in the combined sealing «shevron» systems, consisting of several elements. Besides, material SH-Pur - with the lowered coefficient of friction, ensures easier movement and total absence of effect «stick-sleep» that is important for smooth operation of the gear, without microstoppings and jumps.

SH-Pur can be used as a material for seals of different profiles, for example, in water plunger pumps as a «shevron systems» and in reducers-machines, as a rotor seal of shaft for high speeds of rotation.

Mainly used

- Wipers
- Piston seals
- Rod seals
- O-Rings
- Rotor seals

SH-Pur Material Data Sheet

Properties	Value	Unit	Standard
Hardness	95+/-3	Sh A	DIN 53505
Hardness	48+/-3	Sh D	DIN 53505
Density	1,22	g/cm ³	DIN 53479 or DIN EN ISO 1183-1
Compression set 70°C / 70 h, 10 % deformation	22	%	DIN 53517 or DIN ISO 815-1
Compression set 100°C / 24 h, 20 % deformation	28	%	DIN 53517 or DIN ISO 815-1
100% modulus	≥16	N/mm ²	DIN 53504
Tensile strength	≥46	N/mm ²	DIN 53504
Elongation at break	≥400	%	DIN 53504
Tear strength	110	N/mm	DIN 53515 or DIN ISO 34-1
Abrasion	20	mm ³	DIN 53516
Min. service temperature	-20	°C	
Max. service temperature	+110	°C	