

Polyurethane 54 Shore D (DPU)

Swan Seals DPU is composed of prepolymers based on polyoxytetramethylene glycol (PTMEG) and diphenylmethane diisocyanate (MDI). The hardness is adjusted at 54 +/-2 Shore D which makes it an excellent extrusion resistant and low friction material. The resistance to most common hydraulic fluids and oil-water emulsions makes it a very universal material for seal applications.

PHYSICAL PROPERTIES

Specific gravity	DIN 53479	g/cm ³	1.13
Hardness at 20°C	DIN 53505	Shore D	54 +/-2
100% Modulus	DIN 53504	N/mm ²	>18
Tensile strength	DIN 53504	N/mm ²	>30
Elongation at break	DIN 53504	%	330
Tear strength	DIN 53515	KN/m	125
Resilience	DIN 53512	%	42
Compression set*	DIN 53517	%	32
Hardness at -5°C	DIN 53505	Shore D	57
Hardness at +80°C	DIN 53505	Shore D	52
Min. Service temperature		°C	-30
Max. Service temperature		°C	90

*Compression set 25% deflection 22 hours at 70°C

CHEMICAL RESISTANCE

Water up to 70°	R
Water up to 90°	S
HFA	R
HFB	R
HFC	S
HFD	U
Mineral Oils	R
Vegetable Oils	R
Fuels	S
Ozone	R
Air up to 100°	R
Air up to 150°	U
Air up to 200°	U

MAIN APPLICATION

Rubber preloaded seals (standard and special)
Wipers
Rotary seals
O - Rings, Flange seals and gaskets
Back up rings
Buffers

KEY TO CHEMICAL RESISTANCE

R = resistance
S = suitable
U = unsuitable

ANALYSIS AND EVALUATION

The properties relate to fundamental values for polyurethane products. Values mentioned above are corresponding to ASTM or DIN norm and have been tested on standardized plates in the laboratory. All immersion tests are made under laboratory conditions.