Material Data Sheet U510-G88

Polyurethane U510-G88 – light green
(Soft Grade Polyurethane)

General

U500-G88 is a hydrolysis–resistant (H-PU), casted Polyurethane, based on MDI, Polycarbonate Polyol and certain additives. Due to the adjustment at 90 Shore A it is very flexible and easier to install in tight housing situations and is also used when a “softer” material is needed to have higher compression (preload) of the sealing material.

Physical properties

Density:	DIN 53479	g/cm³	1,17 ±0,03
Hardness at 23°C:	DIN 53505	Shore A	90 ±2
Hardness at +100°C:	DIN 53505	Shore A	85 ±2
100% Modulus:	DIN 53504	N/mm²	≥ 8
300% Modulus:	DIN 53504	N/mm²	≥ 30
Tensile strength:	DIN 53504	N/mm²	≥ 45
Elongation at break:	DIN 53504	%	≥ 300
Tear strength:	DIN 53515	kN/m	≥ 90
Compression set, 24h, 70°C, 25%:	DIN 53517	%	≤ 25
Compression set, 24h, 100°C, 25%:	DIN 53517	%	≤ 45

Temperature range: **-30°C to 115°C**

Chemical resistance

Resistant to:	Water up to 90°C, Sea Water, Mineral Oils, Vegetable Oils, Silicone Oils, Ozone, Oxygen (cold), HFA fluids, HFB fluids
Not Resistant to:	Steam, conc. Acids and Lyes, conc. Alcohols, Solvents, HFD fluids

Main application

Static and dynamic applications, mostly used for U-seals, wipers and packings up to 200 bar pressure in standard hydraulics or pneumatics. U510-G88 can be used as a substitute for N107-B85 or other elastomers with 85 Shore A where the chemical resistance of the elastomer may not be sufficient. Due to its outstanding hydrolysis resistance it can be used in the most common hydraulic fluids, oil in water emulsions but also water power applications.

Analysis and Evaluation

Values mentioned above are based on several tests performed during development and production of the material. Tests have been performed on standard test pieces specified within the relevant standard within the laboratory. Tests performed on any other pieces which are not related to the corresponding standard or made out of any (semi)finished part or any other part deviating in production process, dimension or age of the material from above may result in different values. The data represent our present empirical values and do not disengage the processor or user from his obligation to examine the usage of the material for his specific application.

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