# Material Data Sheet Polyurethane U550-GM95 – dark red (Low Friction Polyurethane)

## General

U550-GM95 is a MoS2 filled, hydrolysis–resistant (H-PU), casted Polyurethane, based on MDI, Polycarbonate Polyol and certain additives. It is recommended in application where reduced friction and poor lubrication is an issue. The material is able to reduce or eliminate the stick-slip effect when it appears.

## Physical properties

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| Density: | DIN ISO 1183-1 | g/cm³ | 1,16 ±0,03 |
| Hardness at 23°C: | DIN ISO 7619-1 | Shore A | 95 ±2 |
| Hardness at +100°C: | DIN ISO 7619-1 | Shore A | 93 ±2 |
| 100% Modulus: | DIN 53504 | N/mm² | ≥ 10 |
| 300% Modulus: | DIN 53504 | N/mm² | ≥ 30 |
| Tensile strength: | DIN 53504 | N/mm² | ≥ 45 |
| Elongation at break: | DIN 53504 | % | ≥ 320 |
| Tear strength: | DIN ISO 34-1 | kN/m | ≥ 110 |
| Compression set, 24h, 70°C, 25%: | DIN ISO 815-1 | % | ≤ 25 |
| Compression set, 24h, 100°C, 25%: | DIN ISO 815-1 | % | ≤ 35 |

* mentioned values are subject to a tolerance of +/- 25%

## Temperature range: -30°C to 125°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

Dynamic applications, mostly used for U-seals, wipers, packings and rotary seals up to 400 bar pressure in standard hydraulics and applications with poor lubrication or even pneumatics. 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, applications in the mining industry and presses. U550-GM95 shall also be preferred in machinery with rough and worn sliding surfaces.

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 represents our present empirical values and does not disengage the end user from their obligation to examine the usage of the material for each specific application.

We reserve the right to update this data sheet from time to time if new empirical values are available. Errors and omissions excepted.

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