Robusthane®
Engineering Excellence

Material
Data Sheet

Polyurethane Massa-CF93

General

Massa-CF93 is a hydrolysis–resistant (H-PU), cast thermoset polyurethane elastomer, based on MDI Polyol with specialized additives. Massa-CF93 is a robust and reliable choice for sealing applications requiring flexibility, durability, and resistance to wear, making it a popular material for most hydraulic applications.

Physical Properties

Density:		g/cm^3	1.15 ±0, 03
Hardness at 20°C:	DIN 53505	Shore A	93 ±2
Hardness at +80°C:	DIN 53505	Shore A	91 ±2
100% Modulus:	DIN 53504	N/mm^2	13.5
300% Modulus:	DIN 53504	N/mm^2	39.5
Tensile strength:	DIN 53504	N/mm^2	43
Elongation at break:	DIN 53504	%	300
Tear strength (without nick):	DIN ISO 34-1	kN/m	120
Tear strength (with nick):	DIN ISO 34-1	kN/m	55
Resilience:	DIN 53512	%	20
Abrasion loss:	ISO 4649	mm^3	30
Compression set, 22h, 70°C:	DIN ISO 815-1	%	≥ 25

Physical Properties

Temperature Range: -5°C to +90°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, diluted acids and alkalis

Not Resistant To: Steam, conc. acids and alkalis, conc. Alcohols, Solvents, HFD fluids, >70°C petroleum

Main Application

Massa-CF93 is recommended for static and dynamic application seals, mostly used for U-seals, wiper seals and packings in standard hydraulic systems. Due to its outstanding hydrolysis resistance it can be used in the most common hydraulic fluids and oil in water emulsions. Additionally, it is a recommended material for offshore applications.

Analysis and Evaluation

The values presented in this document are based on rigorous testing conducted during the development and production of this material. These tests were performed on standard test specimens, as specified in the relevant industry standard, within a controlled laboratory environment. It is important to note that testing on materials that do not conform to the specified standard, or that deviate in their composition, production process, dimensions, or age from the material tested, may yield different results. The data provided represents our current empirical findings and does not relieve the processor or user from their responsibility to thoroughly evaluate the suitability of the material for their specific application.
We retain the right to update this data sheet periodically as new empirical data becomes available.

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