

Material Data Sheet N111-W85

NBR-FDA N111 – white (sulphur cross linked)

General

N111-W85 is a white Nitrile Butadiene Rubber commonly referred to as NBR, Nitrile or BUNA. Good physical characteristics and chemical resistance to the most common hydraulic fluids makes NBR an excellent sealing material. NBR materials are one of the most used elastomers in sealing applications. NBR-FDA N111 – white is approved for the use of applications in contact with foodstuff.

Physical properties

Density:	DIN 53479	g/cm ³	1,36
Hardness at 20°:	DIN 53505	Shore A	85 +/-5
Tensile strength:	DIN 53504	N/mm ²	7,9 +/-15%
Elongation at break:	DIN 53504	%	305 +/-20%
Modulus 100%:	DIN 53504	N/mm	4,5 +/-30%
Tear strength	DIN 53507B	N/mm	7,6
Compression set: 70h/RT	DIN 53517A	%	21 +/-20%
Compression set: 22h/70°C	DIN 53517A	%	23 +/-20%
Compression set: 22h/100°C	DIN 53517A	%	29 +/-20%
Min. service temperature:		°C	-22
Max. service temperature:		°C	100
Short time max. service temp. in air		°C	110

Chemical resistance

Water up to 70°	R	Diesel Fuel	R
Water up to 90°	S	Gasoline Fuel	S
Steam	U	Alcohols	R
HFA, HFB, HFC Fluids	R	Ozone, Oxygen	U
HFD Fluids	U	Air up to 100°	R
Mineral / vegetable oils	R	Air up to 150°	U
Silicone oils	S		
Biodegradable oils	S		

Key to chemical resistance: **R = resistant** **S = suitable** **U = unsuitable**

Main application

Static and dynamic seals (standard and special), wipers, O-rings, flange seals, rotary seals, rubber energizers (preload elements). Applications in the food industry.

Analysis and Evaluation

The mentioned properties are only valid for test pieces of the corresponding ISO, DIN and ASTM standards. They cannot be directly related to seals, gaskets and other sealing products and should be used only as a general guide.