

EPDM FOR THE PROCESSING INDUSTRY



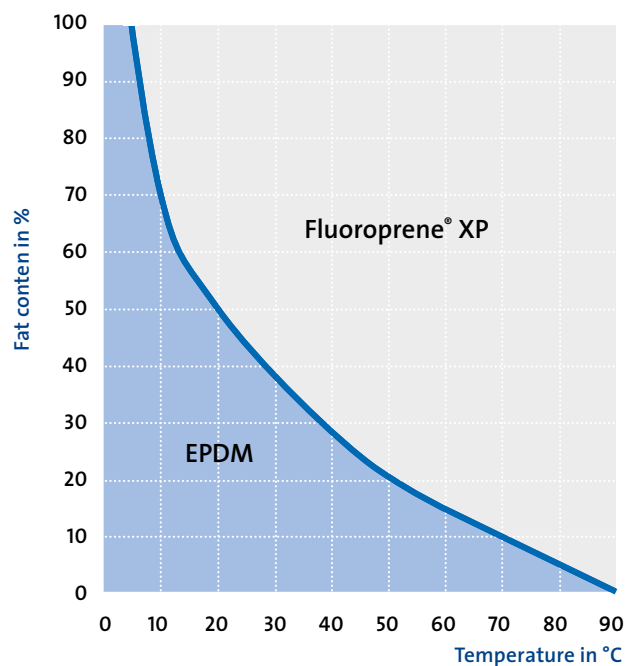
With its outstanding qualities in critical media, our **EPDM materials** are the first choice for a wide variety of O-rings, formed parts and diaphragm applications in the food, beverage, pharmaceutical and chemical industries.

One material – numerous applications

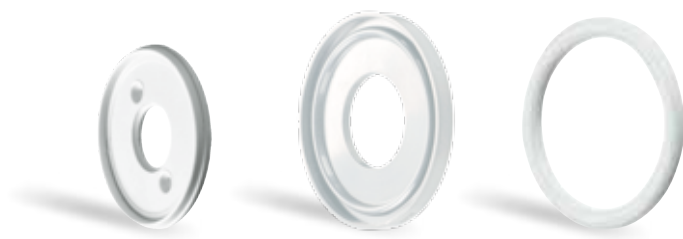
EPDM's outstanding resistance to water and aqueous systems have made it a wide-ranging material in the processing industry. EPDM has limited suitability for environments containing oil or grease, depending on the temperature. **Fluoroprene® XP** is the best choice if the temperature and fat content exceed the limitations on EPDM's use.

VALUE FOR THE CUSTOMER

- Very good stability in acids, bases, polar solvents and CIP/SIP media
- Stability in water and steam up to 180 °C/356 °F
- Very good resistance to aging, ozone and light
- Good elongation at break and tensile strength
- Long lifespan and very high wear resistance
- Outstanding elastic behavior



MATERIAL	COLOR	TEMPERATURE RANGE	PRODUCTS	APPROVALS
60 EPDM 290	black	-40 to +150 °C/-40 to +302 °F	diaphragms	FDA 21 CFR 177.2600, EU Reg. 1935/2004, ADI free
70 EPDM 291	black	-40 to +150 °C/-40 to +302 °F	clamp seals, formed parts, Hygienic Usit®, diaphragms, O-rings, producible with turning technology	FDA 21 CFR 177.2600, 3-A® Sanitary Standards Class II, EU Reg. 1935/2004, USP Ch. 87 and Ch. 88 – Class VI, NSF 51 and 61, ADI free
70 EPDM 391	black	-40 to +150 °C/-40 to +302 °F	profiles, cords	FDA 21 CFR 177.2600, EU Reg. 1935/2004, USP Ch. 87, ADI free
75 EPDM 253356	black	-30 to +140 °C/-22 to +284 °F	formed parts	FDA 21 CFR 177.2600, EU Reg. 1935/2004, ADI free
85 EPDM 292	black	-40 to +150 °C/-40 to +302 °F	formed parts, O-rings, producible with turning technology	FDA 21 CFR 177.2600, 3-A® Sanitary Standards Class II, EU Reg. 1935/2004, USP Ch. 87 and Ch. 88 – Class VI, ADI free
70 EPDM 253815	white	-40 to +150 °C/-40 to +302 °F	clamp seals, formed parts, O-rings	FDA 21 CFR 177.2600, 3-A® Sanitary Standards Class II, EU Reg. 1935/2004, USP Ch. 87 and Ch. 88 – Class VI, ADI free



CHARACTERISTICS AND ADVANTAGES

EPDM in the food industry

In the **dairy industry**, EPDM can definitely be used at low temperatures and amid low fat content despite its Class II classification under the 3-A® Sanitary Standards. EPDM is virtually destined for the **beverage industry** due to its stability in the aqueous media of breweries, mineral springs and soft-drink manufacturers, among others. Fluoroprene® XP can be better suited only if the contact is with special flavors and citrus juices.

EPDM in the pharmaceutical industry

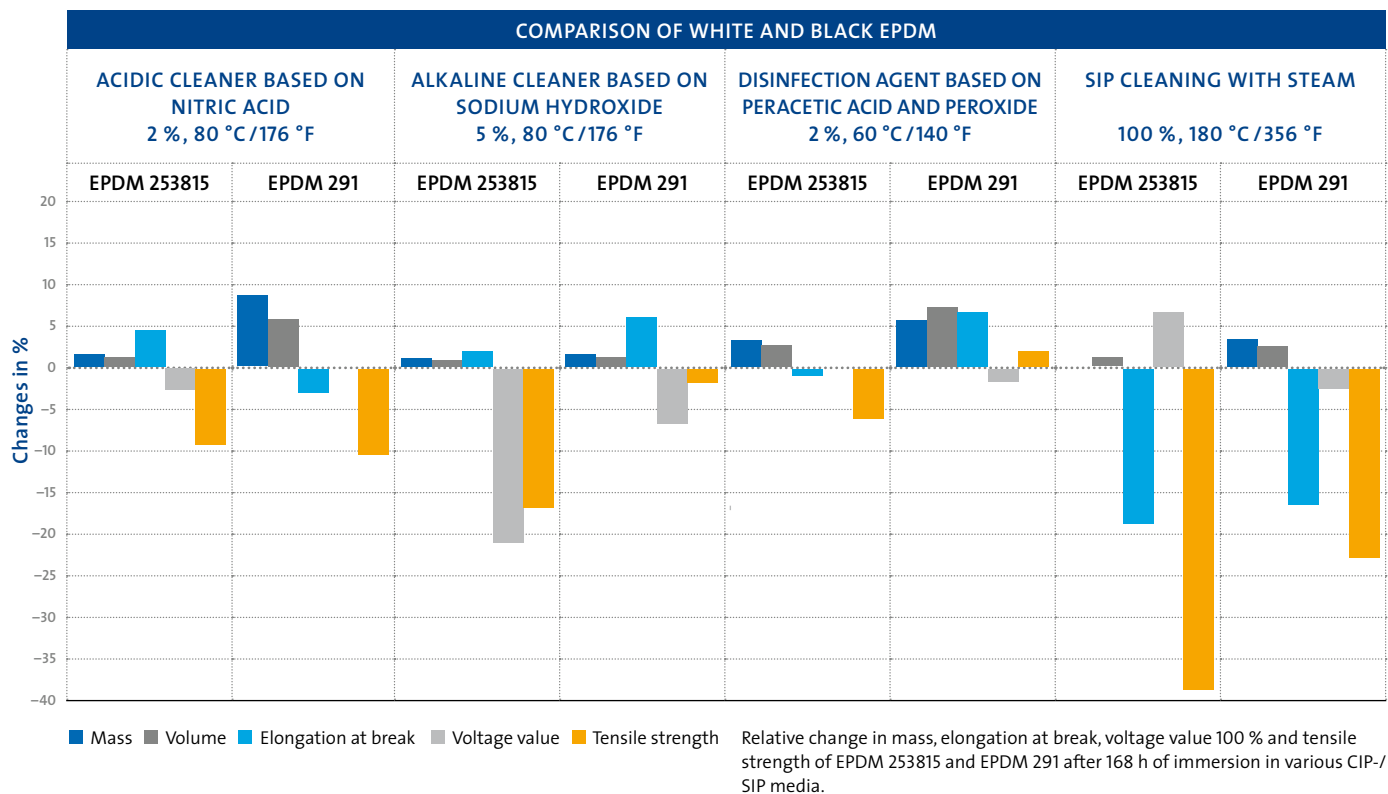
In addition to cleaning, EPDM is also suited to aqueous pharmaceutical products. For example, it is preferred for use in sterilizable bioreactors for fermentation and in autoclaves for high-pressure steam sterilization of culture media. EPDM can also be used in po-

lar solvents such as ethanol and isopropanol, but not in contact with non-polar solvents. Freudenberg offers **white EPDM 253815** for especially hygienic processes. Despite its mineral filler, it offers outstanding CIP/SIP stability and sealing properties like those of a black EPDM. Thanks to its very low swelling rate, significantly below 5 %, it is especially recommended for applications based on Hygienic Design. The **black EPDM 291** is impressive for its mechanical properties, which change comparatively little after contact with cleaning agents. Extractables studies show that these two EPDM materials are suited for highly sensitive pharmaceutical processes.

EPDM in the chemical industry

Here EPDM is suited for contact with polar aqueous salt solutions as well as dilute acids and bases.

EPDM MATERIALS FOR THE PROCESSING INDUSTRY



The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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