

Gasket Material Information

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Markus Nykvist	R & D	April, 2020

EPDM for gasket applications

EPDM materials are together with NBR the most commonly used for gaskets to plate heat exchangers. The most important feature of EPDM is the fully saturated hydrocarbon polymer backbone which gives the best possible thermal and oxidizing stability of all pure hydrocarbon elastomers. The polymer is non-polar and this means (simplified) that it is suitable as gasket materials for polar liquids but not for non-polar liquids.

Resistance to water, steam, and a lot of amines, salt solutions, acids and alkaline is excellent with exception of strong oxidizing acids such as nitric acid or concentrated hot sulphuric acid. The material has good and, in many cases excellent resistance in polar organic fluids such as alcohols, glycols, organic acids, ketones, aldehydes, ethanol amines, low molecular esters etc. The material is not affected by corrosion inhibitors normally used in steam systems. Resistance to sodium hydroxide is excellent.

The material is not resistant to crude oil, fuels, lubricating oil, hydrocarbon solvents, heat transfer oils of hydrocarbon type, asphalt, paraffin etc. Resistance in vegetable oils and animal fats is also not enough.

The materials are especially developed and tested to enable, not only high temperatures, but also to some extent low temperature duties. Polymers and curing systems are carefully selected to secure the best aging and stress relaxation/compression set properties.

There are many types of EPDM grades available depending on duty, varying both with respect of curing system, hardness and industrial or food applications. For more details, see relevant Technical Data Sheet for each compound.

Ozone resistance is excellent, and storage of gaskets for several years is not critical.

Markus Nykvist
R&D Manager