SPXFLOW

Gasket Material Guide

CR - PARAPRENE

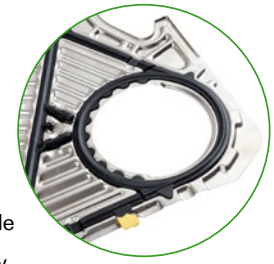
GOLDSBORO Code Character: P ▪ **Color code:** 1 green
Temp. limits: -35°C to +70°C (intermittent 90°C)
(-31°F to +158°F (intermittent 194°F))
Polymer type: Polychloroprene/Chloroprene
Process: Zink Oxide cured
Applications: An elastomer which finds widespread use in sealing applications involving ammonia (R717) and fluorinated refrigerant liquids such as Freon 13, 22 and R134a, but not 11, 21 or 112. It is also suitable for some new refrigerant mixtures. However, extreme care must be exercised when checking its compatibility with these mixtures and any lubricant. For example, Paraprene may be used in refrigeration duties using R134a with either Ester based or Polyalkyl Glycol (PAG) lubricants.
It can be used with titanium plates for applications involving solutions containing free chlorine (e.g.: chlorinated brine), where it performs better than any of the other elastomers available
Limitations: This material should not be used for applications involving hot water or hot aqueous liquids with stainless steel plates. Not FDA compliant. Do not use with food
Former name: Neoprene

EPDM FOOD

Code Character: V and Z ▪ **Color code:** 1 grey
Temp. limits: -35°C to +145°C (intermittent 150°C)
(-31°F to +293°F (intermittent 302°F))
Polymer type: Ethylene Propylene Terpolymer
Process: FDA grade, peroxide cured EPDM
Applications: Used for duties with dilute acids, alkalis, steam and hot water. For duties with small amounts of animal fats the gaskets might have to be glued to the plates
Limitations: May not be used on hydrocarbon solvents or where traces of mineral oil are present. e.g.: compressor oil in refrigerants. For very low pressure operation, special rubbers can be made available down to -44°C (-47°F). For these applications, refer to Goldsboro Engineering Department for further details
Former Colors for Z: Red and blue

NBR PER – PEROXY NITRILE

Code Character: M ▪ **Color code:** 2 yellow
Temp. limits: -15°C to +140°C
(intermittent 150°C)
(5°F to +284°F (intermittent 302°F))
Polymer type: Special Acrylonitrile-Butadiene
Process: FDA grade, peroxide cured nitrile
Applications: Used for aqueous and fatty duties. Also vegetable and mineral oils
Limitations: Severe restrictions apply when using nitric acid for cleaning
Former Colors (Goldsboro): Red and yellow
Former Color (Kolding): Blue



NBR HYD – PARATOR

GOLDSBORO Code Character: T
Color code: 3 yellow
Temp. limits: -15°C to +160°C (intermittent 165°C)
(5°F to +320°F (intermittent 329°F))
Polymer type: Special Acrylonitrile-Butadiene
Process: Hydrogenated nitrile
Applications: A high temperature general purpose material. Used for aqueous and fatty duties. Also vegetable and mineral oils. Can be used where special condition exists such as crude oils and amines
Limitations: Not FDA compliant
Former Colors (Goldsboro): Green and yellow

EPDM STD: EPDM PER: (Industrial)

GOLDSBORO Code Character: Y ▪ **Color code:** 2 grey
Temp. limits: -35°C to +150°C (intermittent 160°C)
(-31°F to +302°F (intermittent 320°F))
Polymer type: Special Ethylene Propylene Terpolymer
Process: Peroxide cured EPDM
Applications: High temperature material for hot water and steam. Also for various chemicals
Limitations: May not be used with fats, hydrocarbon solvents or where traces of mineral oil are present. e.g.: compressor oil in refrigerants. Not FDA compliant
Former Colors: Blue and yellow (plus others)

APV®

EPDM HT: PARATEMP2

GOLDSBORO Code Character: W ▪ **Color code:** one red

Temp. limits: -35°C to +171°C (intermittent 180°C)
(-31°F to +340°F (intermittent 356°F))

Polymer type: Ethylene Propylene Terpolymer

Process: Resin cured EPDM

Applications: High temperature general purpose material for chemical environments and steam / high temperature hot water applications

Limitations: May not be used with fats, hydrocarbon solvents or where traces of mineral oil are present. e.g.: compressor oil in refrigerants. This elastomer is not suitable as a glued gaskets as premature failure can occur. Not FDA Compliant

Former name: None

FKM FOOD - PARACENT

GOLDSBORO Code Character: C

Color code: violet and white

Temp. limits: -5°C to +160°C (intermittent 180°C)
(23° F to +320° F (intermittent 356°F))

Oils and hydrocarbons only: -5°C to +190°C (intermittent 225°C) (23°F to +374°F (intermittent 437°F))

Polymer type: Copolymer of Hexafluoropolypropylene, Vinylidene Fluoride

Process: Various cure systems

Applications: FDA compliant fluororubber material resistant to a wide range of organic solvents, chemicals. Resistant to sulphuric acid. Can be used with vegetable oils at high temperatures. Its compatibility with high temperature aqueous streams and high temperature steam is inferior to other possible choices

Limitations: It is recommended that this material not be used for sodium hydroxide duties

FKM IND - PARAFLOR

GOLDSBORO Code Character: F ▪ **Color code:** 2 violet

Temp. limits: -5°C to +160°C (intermittent 180°C)
(23°F to +320°F (intermittent 356°F))

Oils and hydrocarbons only: -5°C to +205°C (intermittent 230°C) (23°F to +401°F (intermittent 446°F))

Polymer type: Terpolymer of Hexafluoropolypropylene, Vinylidene Fluoride and Tetrafluoroethylene

Process: Peroxide cured fluoromer (non-food)

Applications: Very resistant to high strength mineral acids, resistant to steam and hot water. Can be used with mineral oils at high temperatures

Limitations: May not be used in food applications.
The pressure sealing is inferior and a 0.8 multiplier is recommended on published test pressures. It is also recommended that this material not be used for sodium hydroxide duties

Former Colors: Silver and green

FKM STEAM - PARADUR

GOLDSBORO Code Character: D ▪ **Color code:** 3 violet

Temp. limits: -5°C to +190°C (intermittent 205°C)
(23°F to +374°F (intermittent 401°F))

Oils and hydrocarbons only: -5°C to +200°C (intermittent 215°C)
(23°F to +392°F (intermittent 419°F))

Polymer type: Copolymer of Hexafluoropolypropylene, Vinylidene Fluoride

Process: Peroxide cured fluoromer

Applications: Non-toxic fluororubber material resistant to a wide range of organic solvents, chemicals. Resistant to sulphuric acid. Can be used with vegetable oils at high temperatures

Limitations: It is recommended that this material not be used for sodium hydroxide duties. Not FDA compliant

Former Colors: Silver and grey

PARAMINE

GOLDSBORO Code Character: K ▪ **Color code:** green and yellow

Temp. limits: -0° C to +200° C (intermittent 225°C)
(23°F to +374°F (intermittent 401°F))

Polymer type: Tetrafluoroethylene and propylene (TFEP) copolymer

Process: Various curing agents

Applications: Material of choice for hot amine service when combined with welded pairs. It is highly resistant to acids and alkalis and offers good resistance to nitric acid. Its special strength lies in its exceptional resistance to amines with sour gas, i.e., Hydrogen Sulphide. It is only available for welded pairs

Limitations: Not resistant to highly aromatic fluids such as Toluene, ethers, ketones, some chlorinated solvents, organic acetates, CFC's or acetic acid. Its elastic properties suffer while at low temperatures, e.g. around 0 Celsius

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