

# Food Contact Materials



## Meeting the requirements for superior materials for the food and beverage industry

### Application Examples

- Food processing
- Food packaging
- Food preparation
- Dispensing equipment
- Small appliances

### Range of Materials

#### PLASTICS

##### Turcon®

Turcon® materials are high performance thermoplastics specifically developed for sealing applications. They are based on premium-grade PTFE fluoropolymer resins, with the properties of each compound achieved by the addition of fillers and special processing techniques.

##### Zurcon®

Zurcon® is the brand name for the Trelleborg Sealing Solutions range of engineered plastic-based materials including UHMW-PE as well as PEEK. Its friction characteristics mean it is ideal for reciprocating, very slow rotating and oscillating situations where high wear resistance is required.

#### ELASTOMERS

##### EPDM

Ethylene Propylene Diene Monomer (EPDM) rubber polymers are fully saturated, non-polar hydrocarbon-based elastomers. Their polymer geometry gives them superior compatibility with polar

fluids and polar solvents at elevated temperatures. The materials have high chemical resistance, giving long life in polar solvents, hot water and steam. In addition, they are suitable for contact with alkaline cleaning fluids.

##### NBR/HNBR

Acrylonitrile-Butadiene Rubber (NBR) is a good choice for applications where seals will not be exposed to harsh cleaning regimes, ozone or superheated steam. These materials are copolymers of butadiene and acrylonitrile. The percentage of NBR and HNBR in their formulations determines the materials' performance characteristics.

##### Silicone (VMQ)

Silicone is an extremely versatile material that lends itself to a broad range of application conditions. As a liquid raw material, silicone offers advantages in processing that render it a premier choice of material for technical components where long-term consistency of precision, quality and performance is key.

##### FKM

Trelleborg Sealing Solutions has optimized the performance of our Fluoroelastomer (FKM) material range, engineering it to meet the specific criteria of the processing industry. The materials demonstrate good elevated temperature characteristics, as well as compatibility to acidic CIP fluid, fatty food products, food grade lubricants and oils.

## FOOD CONTACT MATERIALS

### Features and benefits of Trelleborg Sealing Solutions offerings for the food and beverage industry

- Meets ISO 9001 requirements
- Wide range of materials and products available for both static and dynamic applications
- Materials meet a wide range of global certifications and regulations, including FDA, NSF, 3A and EC 1935/2004
- Colored Flexcoat™ FF treatments for seals offer improved visual identity
- Products globally available through Trelleborg Sealing Solutions logistics network

### Highlights: Service PLUS Kitting

Trelleborg Sealing Solutions offers a variety of innovative packaging and kitting solutions to meet our customers' needs. Kitting refers to a collection of related seals in customized packaging. The benefits of kitting include:

- Easy to add complementary information, such as parts lists, instructions or certifications
- Ready to sell as 'spare part/repair kits'
- Can be shipped directly to OEM dealers and service centers without repackaging

### Plastics

Type	Code	Description
Turcon® MF1	MF1	A high grade of virgin PTFE.
Turcon® MF3	MF3	A high grade composition of virgin PTFE resin compounded with modified mineral fillers.
Turcon® MF5	MF5	A high grade composition of virgin PTFE compounded with glass fiber.
Turcon® MF6	MF6	A high grade composition of virgin PTFE resin compounded with aromatic polymer.
Turcon® MF8	MF8	A high grade composition of PTFE resin compounded with anti-wear additives.
Zurcon® Q81	Q81	A UHMW-PE with excellent impact strength, abrasion resistance, low coefficient of friction, as well as very good chemical resistance. Ideally suited for wear applications, especially in contact with metals.
Zurcon® Q40	Q40	A PEEK resin which shows exceptional chemical resistance to organics, acids and bases with best in class fatigue resistance and excellent dimensional stability.

### Elastomers\*

Type	Durometer	Description
EPDM	50-90	Fully saturated, unpolar hydrocarbon based elastomers. Their polymer geometry gives them superior compatibility with polar fluids and polar solvents at elevated temperatures.
FKM	65-90	Good elevated temperature characteristics compatibility to acidic CIP fluid, fatty food products, food grade lubricants and oils.
NBR	50-90	A good choice for applications where seals will not be exposed to harsh cleaning regimes, ozone or superheated steam. These materials are copolymers of butadiene and acrylonitrile. The percentage of these in the NBR formulation determines their performance characteristics.
VMQ	50-80	Shows excellent heat resistance combined with an extraordinary cold flexibility and a very good resistance to weather, ozone and UV rays.

\*Elastomer materials are compliant to the FDA 21 CFR 177.2600 in the applications of Dry Food, Milk and Edible Oils, Aqueous, and Fatty Foods