CREAFLEX®

Special Elastomers

For aggressive media
and extreme
operating conditions

createc
Engineered Plastics

www.creaflex.com

Createc & *CREA*FLEX®

At Createc you will find decades of international experience in sealing technology, especially when it comes to critical applications. In addition to standard O-rings we also specialize in elastomers developed to comply with extreme requirement profiles. These elastomers have excelled in the market through durability and reliability.

Facts about Createc:

- We are a vibrant team with dedicated employees. Our positive working environment drives our daily collaboration internally as well as with our customers and business partners.
- USA, Central Europe, South America, and Asia are all established as core markets.
- At Createc you will find that high quality requirements are not only met by the product itself, but also by the extensive service that we provide.
- We maintain partnerships with innovative plastic manufacturers as well as independent development and test laboratories. Innovation and quality are the demanded focus!
- You will find us at international trade fairs and symposia: ACHEMA (D), OTC (USA), Offshore (GB), Valve World (D) and Int. Rotating Equipment (D)

*CREA*FLEX® special elastomers – as high quality and versatile as your application!

Increasing requirements call for greater safety!

Expanding safety and quality requirements with chemical processes and production equipment, must be balanced with the growing pressures to maintain and reduce cost in industry facilities. Sealing systems must be safe and able to withstand extreme situations in order to ensure process safety and their results.

Createc Engineered Plastics – sealing technology that fits your needs

Seals frequently take on a key function in the process safety of plants. For this reason, core competence in sealing technology should find its application exactly here – so trust *CREA*FLEX® special elastomers and the Createc critical knowledge and manufacturing capabilities!

***CREA*FLEX® elastomers have been used successfully with:**

- Aggressive media in the most demanding operating conditions
- High temperature applications, hot water/steam up to +280°C
- Low temperature applications down to –60°C
- Explosive decompression or rapid gas decompression (RGD)
- Complete FDA compliance, USP VI

Chemical resistance

More safety for your production process!

Seals and gaskets protect chemical products against external influences and contamination during the process and help to prevent emissions. If the most optimal sealing material is used, process safety, availability and plant efficiency are increased.

*CREA*FLEX® perfluor elastomers offer universal resistance to chemicals at high pressures and temperatures, even in the most aggressive process media.
The sealing systems satisfy the most stringent standards for purity and traceability of the materials used. *CREA*FLEX® meets the complete FDA compliance for perfluor elastomers 21 CFR 177.2400 (d1); (d2).

Material properties:

- Universal resistance to chemicals
- Broad temperature application range from –20°C to +320°C
- Excellent hot water and steam resistance
- Lower compression set
- Complete FDA compliance
- Good price-performance ratio
- Long service life

■ *CREA*FLEX® perfluor elastomers for sophisticated applications!

Chemical resistance

Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
PFE-320	FFKM	–15°C	+320°C	• Special FFKM compound with universal chemical resistance • High temperature compound with thermal stability up to +320°C
PFE-260	FFKM	–20°C	+260°C	• Standard FFKM compound with universal chemical resistance • Excellent hot water/steam resistance
CR-250	FKM	–20°C	+250°C	• Special FKM compound for temperatures up to +250°C in critical API media such as acid gas (H_2S), amines, hydrocarbons (benzene, toluene, xylene), methanol
CR-200	FKM	–20°C	+200°C	• Standard FKM compound with broad chemical resistance (70 % fluorine)

High temperatures

Lasting safety at high temperatures!
Hot water/steam presents the most problems in O-ring materials, especially at temperatures above 150°C. Typically, high temperatures occur in power plants and technical process applications. Critical use applications for O-rings are pumps, fittings, and mechanical gaskets.

*CREA*FLEX® HT elastomers offer exceptional resistance in connection with high temperature resistance up to +280°C. As the proven winner in extensive trials with hot water/steam in permanent operation and with a forecasted service life of 33,000 hours (4 years), industry leaders of pumps and fittings have already qualified *CREA*FLEX® HT and are using these materials successfully.

Material properties:
- Extremely high temperature resistance up to +280°C
- Excellent hot water and steam resistance
- Very good resistance in aggressive media
- Lower compression set and high resistance to ageing

■ *CREA*FLEX® special elastomers for high temperature applications

High temperature applications

Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
HT-280	FEPM	–15°C	+280°C	• Special AFLAS® material with temperature resistance up +280°C in heat transfer oils • Very good resistance in acids, alkalis, amines, methanol and acid gas (H_2S)
HT-230	FEPM	–15°C	+230°C	• Standard AFLAS® material with excellent hot water resistance at permanent temperatures of +230°C, very good in CIP cleaning & SIP sterilization
HT-200	EPDM	–15°C	+200°C	• Special EPDM material with excellent hot water resistance at +200°C • Test results with boiler feed water over 8,000 hours of operation
HT-180	EPDM	–50°C	+180°C	• Standard EPDM material with excellent hot water resistance at +180°C • Extremely broad temperature range and cold flexibility down to –50°C

Low temperatures

Reliable, even in the extreme cold!

Manufacturers of compressors, pumps and valves are often confronted with low temperature applications. It is well known that elastomers change their mechanical characteristics at temperatures near freezing and thus the sealing properties are massively influenced. At temperatures below –20°C there is also the danger of so-called “glass hardness” and irreversible brittleness of the elastomer may occur. The consequences of damaged seals are leakages, and thus contribute to the failure of compressors, pumps and valves as well as the associated effects on the production process.

*CREA*FLEX® LT elastomers show extremely high temperature resistance down to –60°C, even in aggressive media. The performance and service life of valves, pumps and mechanical seals is significantly increased by using *CREA*FLEX® LT elastomers.

Material properties:

- Extremely high temperature resistance down to –60°C
- Very good resistance in aggressive media
- Long service life

*CREA*FLEX® special elastomers for low temperature applications

Low temperature applications

Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
LT-60	FKM	–60°C	+200°C	• Special FKM compound with cold flexibility down to –60°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
LT-50	FKM	–50°C	+200°C	• Special FKM compound with cold flexibility down to –50°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
LT-40	FKM	–40°C	+200°C	• Special FKM compound with cold flexibility down to –40°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
LT-30	FKM	–30°C	+200°C	• Standard FKM compound with cold flexibility down to –30°C • Very good resistance in natural gas, oil, gasoline and hydrocarbons

Explosive decompression

Sealing off aggressive media and critical gases safely!

Extraordinary loads on sealing materials are most often found in the oil and gas industry. Seals used with critical gases, such as natural gas containing CH_4, H_2S and CO_2 fractions, must function safely at high pressures of up to 400 bar. If pressure is released quickly, which is customary with compressors at a rate of 100 bar/min, damage due to "explosive decompression" may occur with conventional elastomer seals. The consequential costs involved in the case of standstills/shutdowns are immense.

*CREA*FLEX® high-tech elastomers satisfy these extreme requirements safely and reliably and contribute to a large extent to the process safety of the production plant.

Material properties:

- Extremely resistant to "explosive decompression"
- Long service life
- Very good resistance in aggressive media such as acid gas, amines, methanol, aromatic hydrocarbons

■ *CREA*FLEX® special elastomers for critical transfer media and extreme operating conditions in use!

Explosive decompression

Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
HP-400	FFKM	–20°C	+260°C	• Special FFKM compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
HP-301	FKM	–46°C	+250°C	• Special FKM compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
HP-300	FEPM	–15°C	+230°C	• Special AFLAS® material for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
HP-151	HNBR	–50°C	+150°C	• Special HNBR compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard

FDA compliance & USP VI approval

Excellent purity in the food and pharmaceutical areas!

Elastomers, which are used in the food and pharmaceutical industries, are subject as a rule to the strict regulations of the FDA and USP approvals. Createc possesses FDA compliance for all its elastomer materials, i.e. FFKM, FEPM, FKM, EPDM as well as HNBR and will even supply seals in a white or black design upon request.

Furthermore, *CREA*FLEX® FFKM extraction data satisfies the strict FDA requirements for perfluor elastomers according to 21 CFR177.2400 (d1) and (d2) and in certain cases, clearly surpassed (change from beat) the required limits established by the FDA Guidelines.

Material properties:

- FDA compliance for all *CREA*FLEX® elastomers FFKM, FEPM, FKM, EPDM and HNBR
- USP VI approval for all *CREA*FLEX® materials
- *CREA*FLEX® elastomers comply to all FDA and USP VI standards
- Excellent purity, safety and environmental compatibility
- Very long service life

■ *CREA*FLEX® food grade elastomers with FDA compliance for 100% purity and safety in the production process

FDA compliance & USP VI approval

Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
FDA-261	FFKM	–20°C	+260°C	• FFKM (white), compliant with FDA 21 CFR 177. 2400 (d1) & (d2) and USP CLASS VI
FDA-260	FFKM	–20°C	+260°C	• FFKM (black), compliant with FDA 21 CFR 177. 2400 (d1) & (d2) and USP CLASS VI
FDA-231	FEPM	–15°C	+230°C	• AFLAS® (white), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
FDA-230	FEPM	–15°C	+230°C	• AFLAS® (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
FDA-201	FKM	–20°C	+200°C	• FKM (white), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
FDA-200	FKM	–20°C	+200°C	• FKM (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
FDA-181	EPDM	–50°C	+180°C	• EPDM (white), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
FDA-180	EPDM	–50°C	+180°C	• EPDM (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI

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Product range	Material no.	Polymer type	Temp. (min)	Temp. (max)	Area of application
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	PFE-260	FFKM	–20°C	+260°C	• Standard FFKM compound with universal chemical resistance • Excellent hot water/steam resistance
	CR-250	FKM	–20°C	+250°C	• Special FKM compound for temperatures up to +250°C in critical API media such as acid gas (H_2S), amines, hydrocarbons (benzene, toluene, xylene), methanol
	CR-200	FKM	–20°C	+200°C	• Standard FKM compound with broad chemical resistance (70% fluorine)
High temperature applications	HT-280	FEPM	–15°C	+280°C	• Special AFLAS® material with temperature resistance up +280°C in heat transfer oils • Very good resistance in acids, alkalis, amines, methanol and acid gas (H_2S)
	HT-230	FEPM	–15°C	+230°C	• Standard AFLAS® material with excellent hot water resistance at permanent temperatures of +230°C, very good in CIP cleaning & SIP sterilization
	HT-200	EPDM	–15°C	+200°C	• Special EPDM material with excellent hot water resistance at +200°C • Test results with boiler feed water over 8,000 hours of operation
	HT-180	EPDM	–50°C	+180°C	• Standard EPDM material with excellent hot water resistance at +180°C • Extremely broad temperature range and cold flexibility down to –50°C
Low temperature applications	LT-60	FKM	–60°C	+200°C	• Special FKM compound with cold flexibility down to –60°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
	LT-50	FKM	–50°C	+200°C	• Special FKM compound with cold flexibility down to –50°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
	LT-40	FKM	–40°C	+200°C	• Special FKM compound with cold flexibility down to –40°C • Very good resistance in API media such as toluene, acid gas (H_2S) and methanol
	LT-30	FKM	–30°C	+200°C	• Standard FKM compound with cold flexibility down to –30°C • Very good resistance in natural gas, oil, gasoline and hydrocarbons
Explosive decompression	HP-400	FFKM	–20°C	+260°C	• Special FFKM compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
	HP-301	FKM	–46°C	+250°C	• Special FKM compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
	HP-300	FEPM	–15°C	+230°C	• Special AFLAS® material for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
	HP-151	HNBR	–50°C	+150°C	• Special HNBR compound for applications in case of explosive decompression • Test certificate according to NORSOK M-710 Standard
FDA compliance & USP VI approval	FDA-261	FFKM	–20°C	+260°C	• FFKM (white), compliant with FDA 21 CFR 177. 2400 (d1) & (d2) and USP CLASS VI
	FDA-260	FFKM	–20°C	+260°C	• FFKM (black), compliant with FDA 21 CFR 177. 2400 (d1) & (d2) and USP CLASS VI
	FDA-231	FEPM	–15°C	+230°C	• AFLAS® (white), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
	FDA-230	FEPM	–15°C	+230°C	• AFLAS® (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
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	FDA-200	FKM	–20°C	+200°C	• FKM (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
	FDA-181	EPDM	–50°C	+180°C	• EPDM (white), compliant with FDA 21 CFR 177.2600 and USP CLASS VI
	FDA-180	EPDM	–50°C	+180°C	• EPDM (black), compliant with FDA 21 CFR 177.2600 and USP CLASS VI

Subject to change · EN · 11/2014

Headquarters
Createc GmbH & Co. KG
Eckenerstr. 65/1
88046 Friedrichshafen, Germany
Tel. + 49 7541 70077-0
Fax + 49 7541 70077-20
info@creaflex.com · www.creaflex.com

Office North America
Createc GmbH & Co. KG
12240 Hawkins Way
Fort Wayne, Indiana USA, 46814-9156
Tel. + 1 260-616-0297
info-usa@creaflex.com

Office Brazil INTERCEDERE
Createc Representative Brazil
AV Brasil 3666 – Benfica
20930-040 Rio de Janeiro, Brazil
Tel. + 55 21 94 14 15 98
info-brazil@creaflex.com