



Isolast® XploR™ J9523

RAPID GAS DECOMPRESSION RESISTANT MATERIALS



Rapid gas decompression is a major concern to the oil and gas industry. It occurs when applied system pressure is released, causing absorbed gas to expand, potentially damaging elastomer seals.

Trelleborg Sealing Solutions has focused on this issue and presents the XploR™ range, an entire family of advanced elastomers especially developed for oil and gas applications. The portfolio includes compounds in HNBR, FKM, Aflas® and Isolast® Perfluoroelastomer, each of which demonstrates best-in-class Rapid gas Decompression (RGD) resistance for its material type.

XploR™ J9523 combines excellent chemical and thermal properties, with outstanding low temperature capability. Ideally suited for wellhead and other drilling applications involving aggressive media where the ambient temperature above and below ground is below 0 °C for prolonged periods. It exhibits superior high pressure sealing performance in RGD situations, which is supported by independent testing in accordance with institutional standards.

When the composition of the well or conditions of the application are known, FFKM XploR™ J9523 may prove the optimum and most cost-effective material for your application, especially when operating temperatures are extremely low.

For further information on selecting the right compound and advice on seal specification for your individual application, consult your local Trelleborg Sealing Solutions marketing company. **Find contact details at www.tss.trelleborg.com.**

Features and benefits

- Unrivalled RGD resistance within its material type
- Independently tested to NORSOK M-710 and BS EN ISO 23936-2 standards
- Operating temperatures from -40 °C to +240 °C / -40 °F to +464 °F with short excursions to 250 °C / +482 °F
- Outstanding performance at extremely low temperatures
- Exceptional mechanical performance
- Low long-term compression set
- Outstanding resistance to aggressive media such as hot organic and inorganic acids, caustics, amines (especially hot amines), ketones, aldehydes, sour gases, hydrocarbons, steam, formate solutions and mixed process streams common within oil & gas applications
- Extended life in aggressive media, including the hydrocarbon and aqueous media common within oil & gas applications
- High modulus and high strength

Applications

- Separation equipment
- Connector systems
- Valves
- Wellhead control equipment
- Tubing hangers
- Swivel stacks on Floating Production Storage and Offloading (FPSO) vessels
- Blowout Preventers (BOPs)
- Downhole Tools

XploR™ is available in all standard international O-Ring sizes and cross-sections along with custom-engineered solutions and specially designed seal profiles.

FFKM XPLOR™ J9523 COMPOUND DATA

	Standard	J9523
Elastomer base		EXT LT-FFKM
Hardness	DIN 53505	90+/-5 Shore A
Color		Black
Specific Gravity	DIN EN ISO 1183-1	1.94+/-0.03
Tensile Strength	DIN 53 504	17.1 MPa/ 2,480 psi
Elongation at Break	DIN 53 504	208%
Modulus at 100%	DIN 53 504	7.0 MPa/ 1,015 psi
Compression Set 72 hrs / 200 °C / 392 °F	DIN ISO 815 Type B	25%
Air Aging 70 hrs @ 250 °C / 484 °F	DIN 53508	-1 Shore A (Hardness change) -5% (Tensile change) -12% (Elongation change)
Fluid Immersion Testing: Oil ASTM No. 1: 70 hrs @ 150 °C / 302 °F Change in Hardness Change in Volume	DIN ISO 1817	-1 Shore A +1.3%
Fluid Immersion Testing: Oil IRM 903 70 hrs @ 150 °C / 302 °F Change in Hardness Change in Volume	DIN ISO 1817	-2 Shore A +2.6%
Fluid Immersion Testing: Water 70 hrs @ 100 °C / 212 °F Change in Hardness Change in Volume	DIN ISO 1817	-1 Shore A +1.6%
Fluid Immersion Testing: Methanol 70hrs @ 40 °C / 104 °F Change in Hardness Change in Volume	DIN ISO 1817	-1 Shore A +0.6%
TR 10 Point	TBS 00036	-28 °C / -18.4 °F
Service Temperature		-40 °C to +240 °C / -40 °F to +464 °F
Excursion Temperature		To +250 °C / 482 °F

Material properties are average values resulting from tests, as specified, on standard test samples. The values are for guidance only. It is the responsibility of the user to test material for suitability within a specific application. Information is correct at time of publication.

