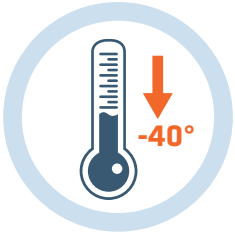
OLD REX ICE®

OLD REX ICE® (FFKM) qualified according to NORSOK M710 rev3 *ISO 23936-2:2011*



LOW TEMPERATURE

element

OLD REX ICE
supplied by

Oldrati Guarnizioni Industriali S.p.a

have been tested according to the requirements of

BS EN ISO 23936-2 [ISO23936-2:2011(E)]
(Rapid gas decompression resistance)

PASSED

Test gas:	90/10 mol% CH_4/ CO_2
Test temperature:	100 ±2 °C
Test pressure:	150 bar (15 MPa)
Number of cycles:	8
Decompression rate:	19.5 bar/minute
Seal Size:	312 (ISO 3601-1/AS 568)

Luke Shield — Scientist

30th June 2015 — Date

Element Hitchin has been assessed to BS EN ISO 9001 by the British Standards Institution (BSI) and is a registered firm under the BSI Quality Assurance scheme for the provision of professional and technical services.

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The growing requirements for a **FFKM** able to operate both at high and low temperatures pushed **Oldrati** to develop **OLD REX ICE**.

The main performance characteristics of OLD REX ICE are:

- **Extremely high temperature resistance up to: +230°C**
- **Extremely low temperature resistance until: -40°C**

As a confirmation of Oldrati's skills and capabilities, during the **RGD test**, which was conducted by Element®, all samples received the **highest possible rating 0000**.

RGD TEST CONDITIONS		
Temperature	°C	100±2
Pressure	MPa (bar)	15 +1/-0.5 (150 +10/-5)
No. of cycles		8
Dwell between cycles	hour	1
Decompression rate (average)	MPa/min (bar/minute)	1.95 (19.5)
Gas type	$_{mol}$%	90/10 CH_4/CO_2
SEAL HOUSING DETAILS CONDITIONS		
Seal compression direction	Radial	
Groove ID	mm	25.40
Groove OD	mm	16.01
Groove width	mm	5.67
Squeeze (average)	%	12.24
Groove fill (area basis)	%	85
Number of seals tested		4
ISO TEST SEAL RATINGS		
SEAL REPLICATE	RATING	PASS/FAIL
1	0000	Pass
2	0000	Pass
3	0000	Pass
4	0000	Pass

Founded in 1964 in Italy, Oldrati Group is recognized as one of the international leaders in Rubber and Plastic sector.
Oldrati operates multiple production sites in Europe thus ensuring high quality and services for global customers.
Oldrati's specialization in the Oil and Gas field led the Group to achieve prestigious qualifications.

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RUBBER & PLASTIC GOVERNANCE

OIL & GAS APPROVED COMPOUNDS PORTFOLIO

OLDRATI NAME	ASTM 1418 NOMENCLATURE	POLYMER DESCRIPTION	SPECIFICATION APPROVAL
OLD-REX ICE	FFKM	Black perfluoroelastomer rubber with outstanding chemical resistance and low temperature applications	**NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD-REX P495N	FFKM	Black perfluoroelastomer rubber with outstanding chemical resistance	**NORSOK M-710** Rev. 2 **NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD EDLT 90NL	FKM	Black fluorocarbon rubber peroxide cured for very low temperature application	**NORSOK M-710** Rev.3 (ISO 23936-2) **SAUDI ARAMCO** 06-SamSS-001 (2013)
OLD EDG 90N	FKM	Black fluorocarbon rubber peroxide cured for low temperature application	**NORSOK** M-710 Rev. 2 **NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD EDG 95N	FKM	Black fluorocarbon rubber peroxide cured for low temperature application	**TOTAL GS PVV 142** 03/01 Rev.00 **NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD EDG 98N	FKM	Black fluorocarbon rubber peroxide cured for low temperature application	**NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD EDFP 95NA	FKM	Black fluorocarbon rubber peroxide cured with improved chemical resistance	**SAUDI ARAMCO 06-SamSS-001** (2013)
OLD EDFP 95N	FKM	Black fluorocarbon rubber peroxide cured with improved chemical resistance	**TOTAL GS PVV 142** 03/01 Rev.00
OLD EDB 95N	FKM	Black fluorocarbon rubber bisphenolic cured with improved chemical resistance	**NORSOK M-710** Rev. 2
OLD EDA 95N	FKM	Black fluorocarbon rubber bisphenolic cured	**NORSOK M-710** Rev. 2
OLD EDAF 90N	FEPM	Black fluorocarbon rubber peroxide cured specifically designed in ammine service	**NORSOK M-710** Rev. 2
OLD NHP ICE 90	HNBR	Black hydrogeneted nitrile butadiene rubber peroxide cured	**NORSOK M-710** Rev. 3 (ISO 23936-2)
OLD EDNHP 90N	HNBR	Black hydrogeneted nitrile butadiene rubber peroxide cured	**TOTAL GS PVV 142** 03/01 Rev.00
OLD ULTRA ED 90N	HNBR	Black hydrogeneted nitrile butadiene rubber peroxide cured	**TOTAL GS PVV 154** Rev.0