

Technical Data Sheet KIR98-FKM

The compound has been tested according to the requirements of

NORSOK M-710 Edition 3 and ISO 23936-2

(Rapid gas decompression resistance)

ELASTOMERBASIS	BASIC ELASTOMER	FKM ShA 98			
MISCHUNG	COMPOUND	KIR98FKM			
FARBE	COLOUR	SCHWARZ (BLACK) RAL 9005			
EIGENSCHAFTEN	PROPERTIES	SPEC	EINHEITEN UNITS	SOLL-WERTE NOMINAL VAL.	IST-WERTE TESTED VALUE
REISSFESTIGKEIT (S2)	TENSILE STRENGTH (S2)	DIN 53504	MPa		12,9
REISSDEHNUNG (S2)	ELONGATION AT BREAK (S2)	DIN 53504	%		110
SPANNUNGSWERT 100 % (S2)	MODULUS 100 % (S2)	DIN 53504	MPa		11,5
HÄRTE	HARDNESS	DIN 53505	Shore A	96 ±2	95
WEITERREIßWIDERSTAND (S2)	TEAR STRENGTH (S2)	DIN ISO 34-1 A	N/mm		4,7
DICHTE	SPECIFIC GRAVITY	DIN 53479	g/cm ³		2,255
DRUCKVERFORMUNGSREST	COMPRESSION SET 24h / 200°C	DIN ISO 815-1 B/A	%		32
DRUCKVERFORMUNGSREST	COMPRESSION SET 24h / 175°C	DIN ISO 815-1 B/A	%		26
WÄRME-ALTERUNG	HEAT AGING	DIN 53508		72 h/ 250°C	
REISSFESTIGKEIT (S2)	TENSILE STRENGTH	DIN 53504	MPa		13,3
REISSDEHNUNG (S2)	ELONGATION AT BREAK	DIN 53504	%		100
HÄRTEÄNDERUNG	HARDNESS CHANGE	DIN 53505	Shore A		+2
BESTÄNDIGKEIT GEGEN FUEL C	RESISTANCE AGAINST FUEL C			72 h/ 23°C	
REISSFESTIGKEIT (S2)	TENSILE STRENGTH	DIN 53504	MPa		11,5
REISSDEHNUNG (S2)	ELONGATION AT BREAK	DIN 53504	%		125
HÄRTEÄNDERUNG	HARDNESS CHANGE	DIN 53505	Shore A		-3
VOLUMENÄNDERUNG	VOLUME CHANGE	DIN ISO 1817	%		+3,6

ELASTOMERBASIS	BASIC ELASTOMER	FKM ShA 98
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BESTÄNDIGKEIT GEGEN IRM 903	RESISTANCE AGAINST IRM 930			72 h/ 150°C
REISSFESTIGKEIT	TENSILE STRENGTH	DIN 53504	MPa	12,9
REISSDEHNUNG	ELONGATION AT BREAK	DIN 53504	%	115
HÄRTEÄNDERUNG	HARDNESS CHANGE	DIN 53505	Shore A	-2
VOLUMENÄNDERUNG	VOLUME CHANGE	DIN ISO 1817	%	+3,4
KÄLTEPRÜFUNG	LOW TEMPERATURE RESISTANCE			
STATISCHER GLASÜBERGANGSPUNKT	STATIC GLASS TRANSITION TEMPERATURE	ISO 11357	°C	-12
GLASÜBERGANGSPUNKT	GLASS TRANSITION TEMPERATURE (T _g)	ASTM D3418	°C	-12
KÄLTESPRÖDIGKEITSTEMPERATUR	BRITTLINESS POINT	ISO 812	°C	-12
TR10	TR10	ISO 2921	°C	-15,7
RHEOMETER MONSANTO 2000 E	RHEOMETER MONSANTO 2000 E			6 min/ 180°C
DREHMOMENTMINIMUM	MINIMUM TORQUE	DIN 53529	dNm	6,34
t10	t10	DIN 53529	min	0,55
t90	t90	DIN 53529	min	1,71
DREHMOMENTMAXIMUM	MAXIMUM TORQUE	DIN 53529	dNm	40,12

Service temperature long term use -25°C to +200°C
Service temperature short term use -32°C to +225°C

Unsere Prüfberichte beruhen auf Messungen an Stichproben und stellen nur eine technische Beschreibung unserer Produkte dar. Sie entbinden nicht von der Prüfung der Ware für Ihre Zwecke und Verfahren.
Our test reports are based on random measurements and are meant to be nothing but a technical description of our products. They do not relieve our customers from checking the goods for their purpose and procedures.

Kirmek S.r.l. unipersonale

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O-rings in compound

KIR98-FKM

supplied by

Kirmek s.r.l. Unipersonale, Italy

have been tested according to the requirements of

**NORSOK M-710 Edition 3 and ISO 23936-2
(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:	20.3 bar/minute
Seal Size:	312 (ISO 3601-1/AS 568)

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Senior Scientist

3rd May 2022
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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TEST CONDITIONS

RGD TEST COMMISSIONED BY		
Kirmek s.r.l. Unipersonale, Italy		
SEAL COMPOUND DETAILS		
Seal Manufacture	Kirmek s.r.l. Unipersonale, Italy	
Supplied by	Kirmek s.r.l. Unipersonale, Italy	
Compound name/number/reference	KIR98-FKM	
Elastomer type to ASTM D1418	None known	
Lot/Batch No.	Not Disclosed	
Seal type	O-ring	
Manufacturing method	Not disclosed	
Seal size (ISO3601-1/AS 568)	BS312	
CSD (nominal)	mm	5.33
Mean CSD (actual, radial)	mm	5.21
RGD TEST CONDITIONS		
Temperature	°C	100 ±2
Pressure	MPa (bar)	15 +2/-0 (150 +10/-5)
No. of cycles		8
Dwell between cycles	hour	1
Decompression rate (average)	MPa/min (bar/minute)	2.0 (20)
Gas type	mol%	90/10 CH ₄ /CO ₂
SEAL HOUSING DETAILS CONDITIONS		
Seal compression direction	Radial	
Groove ID	mm	25.3
Groove OD	mm	15.94
Groove width	mm	4.7
Squeeze (average)	%	13.4
Groove fill (area basis)	%	80
Number of seals tested	4	
ISO TEST SEAL RATINGS		
SEAL REPLICATE	RATING	PASS/FAIL
1	1000	PASS
2	0000	PASS
3	0000	PASS
4	1000	PASS
OVERALL RATING	PASS	
GENERAL		
Test laboratory	Element Materials Technology, Hitchin, U.K.	
Test date		
Test gas certified and available	YES/NO	YES
Transducer calibration available	YES/NO	YES
P/T log available	YES/NO	YES
TEST LABORATORY STAMP/SIGNATURE	 element Element Hitchin, UK	

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