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Technical Data Sheet KIR98-HNBR

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**	**HNBR ShA98**			
MISCHUNG	COMPOUND	KIR98HNBR			
FARBE	COLOUR	SCHWARZ (BLACK) RAL 9005			
EIGENSCHAFTEN	**PROPERTIES**	**SPEC**	**EINHEITEN UNITS**	**SOLL-WERTE NOMINAL VAL.**	**IST-WERTE TESTED VALUE**
ZUGFESTIGKEIT (S2)	TENSILE STRENGHT (S2)	DIN 53504	MPa		18,7
BRUCHDEHNUNG (S2)	ELONGATION AT BREAK (S2)	DIN 53504	%		181
ZUGSPANNUNG 100 % (S2)	MODULUS 100 % (S2)	DIN 53504	MPa		10,5
HÄRTE	HARDNESS	DIN ISO 7619	Shore A	96 ±2	96
HÄRTE	HARDNESS	DIN ISO 7619	Shore D		58
RÜCKPRALLELASTIZITÄT	REBOUND ESILIENCE	DIN 53512	%		24
WEITERREIßWIDERSTAND	TEAR STRENGHT	DIN ISO 34-1 A	N/mm		5,2
DICHTE	SPECIFIC GRAVITY	DIN ISO 1183-1	g/cm		1,29
DRUCKVERFORMUNGSREST	COMPRESSION SET 24h / 150°C	DIN ISO 815-1 B/A	%		29
DRUCKVERFORMUNGSREST	COMPRESSION SET 24h / 175°C	DIN ISO 815-1 B/A	%		37
WÄRMEALTERUNG	**HEAT AGING**	**DIN 53508**			**168 h/150°C**
ZUGFESTIGKEIT (S2)	TENSILE STRENGHT (S2)	DIN 53504	MPa		20,3
BRUCHDEHNUNG (S2)	ELONGATION AT BREAK (S2)	DIN 53504	%		133
HÄRTEÄNDERUNG	HARNESS CHANGE	DIN 53505	Shore A		+4
WÄRMEALTERUNG	**HEAT AGING**	**DIN 53508**			**1008h/150°C**
ZUGFESTIGKEIT (S2)	TENSILE STRENGHT (S2)	DIN 53504	MPa		22,6
BRUCHDEHNUNG (S2)	ELONGATION AT BREAK (S2)	DIN 53504	%		54
HÄRTEÄNDERUNG	HARDNESS CHANGE	DIN 53505	Shore A		+7

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ELASTOMERBASIS	**BASIC ELASTOMER**	**HNBR ShA98**		
KÄLTEPRÜFUNG	**LOW TEMPERATURE RESISTANCE**			
STATISCHER GLASÜBERGANGSPUNKT	STATIC GLASS TRANSISTION TEMPERATURE	ISO 11357	°C	-20
TR10	TR10	ISO 2921	°C	-19,5
RHEOMETER MONSANTO 2000 E	**RHEOMETER MONSANTO 2000 E**			**6 min/180°C**
DREHMOMENTMINIMUM	MINIMUM TORQUE	DIN 53529	dNm	2,1
t10	t10	DIN 53529	min	0,47
t90	t90	DIN 53529	min	3,65
DREHMOMENTMAXIMUM	MAXIMUM TORQUE	DIN 53529	dNm	72,14

Service temperature long term use -29°C to +130°C
Service temperature short term use -35°C to +150°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.

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O-rings in compound

KIR98 HNBR

supplied by

Kirmek S.r.l

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:	20.1 bar/minute
Seal Size:	312 (ISO 3601-1/AS 568)

Keyur Somani
Senior Scientist

6th November 2018
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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Element Hitchin verify that O-rings in compound **KIR98 HNBR** supplied by Kirmek S.r.l have been subjected to a multi-cycle RGD test under the conditions detailed below.

RGD TEST COMMISSIONED BY		
Kirmek Srl Unipersonale		
SEAL COMPOUND DETAILS		
Seal Manufacture	Kirmek S.r.l	
Supplied by	Kirmek S.r.l	
Compound name/number/reference	KIR98 HNBR	
Elastomer type to ASTM D1418	HNBR	
Lot/Batch No.	Not Disclosed	
Seal type	O-ring	
Manufacturing method	Not disclosed	
Seal size (ISO3601-1/AS 568)	312	
CSD (nominal)	mm	5.33
Mean CSD (actual, radial)	mm	5.35
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	25.44
Groove OD	mm	15.96
Groove width	mm	5.67
Squeeze (average)	%	11.3
Groove fill (area basis)	%	83.5
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
OVERALL RATING	PASS	
GENERAL		
Test laboratory	Element Materials Technology, Hitchin, U.K.	
Test date	12th October 2018 to 19th October 2018	
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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