

FICHA TÉCNICA TECHNICAL DATA SHEET FICHE MATIERE¹

Código mezcla <i>Compound pn</i> <i>Réf. Mélange</i>	Mezcla <i>Compound</i> <i>Mélange</i>	Material <i>Material</i> <i>Matière</i>	Dureza <i>Hardness</i> <i>Dureté</i>	Color <i>Colour</i> <i>Couleur</i>
0770	FFKMN9LT-122920	FFKM Evolast® N9LT <small>Anti-Explosive Decompression</small>	90	NEGRO BLACK NOIR

Temperaturas de trabajo <i>Working conditions</i> <i>Tenue en température</i>	Min.	Max. (en continuo / long term / en continu)	Max. (en punta / peak / en pointe)
	-46 °C	+250 °C	+270 °C

REACH				
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Conforme <i>In accordance with</i> <i>Conforme à:</i>	Norsok M710
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Características <i>Technical properties</i> <i>Propriétés techniques</i>	Método de prueba <i>Test method</i> <i>Méthode</i>	Valores garantizados <i>Guaranteed values</i> <i>Valeurs garanties</i>	Unidad de medida <i>Unit of measure</i> <i>Unité de mesure</i>
Dureza <i>Hardness</i> <i>Dureté</i>	ASTM D 2240	90 +/-5	Shore A
Peso específico <i>Specific gravity</i> <i>Poids spécifique</i>	ASTM D 297	1,91 +/-0,03	g/cm ³
Resistencia a la tracción <i>Tensile strenght</i> <i>Résistance à la traction</i>	ASTM D 1414	11,8	MPa
Alargamiento a rotura <i>Elongation at break</i> <i>Allongement à la rupture</i>	ASTM D 1414	115	%
Resistencia al ozono <i>Ozone resistance</i> <i>Résistance à l'ozone</i>	h °C al. % pphm PASS		

Deformación permanente a la presión <i>Compression set</i> <i>Déformation rémanente à la pression</i>				
Características <i>Technical properties</i> <i>Propriétés techniques</i>		Método de prueba <i>Test method</i> <i>Méthode</i>	Valores garantizados <i>Guaranteed values</i> <i>Valeurs garanties</i>	Unidad de medida <i>Unit of measure</i> <i>Unité de mesure</i>
Deform. %	70 h	200 °C	ASTM D 395 B	26
				%

1 Los datos que facilitamos son únicamente indicativos y deben ser utilizados por personas cualificadas técnicamente, bajo su responsabilidad y/o riesgos. JIOrings no asumirá ninguna responsabilidad por el uso indebido de los datos y de las informaciones. Además, este informe no puede ser utilizado para infringir las leyes y/o las patentes vigentes. Finalmente, destacamos que los resultados obtenidos en las piezas acabadas pueden ser bastante diferentes de los datos obtenidos en laboratorio a partir de probetas.

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Les données indiquées ne doivent être considérées qu'à titre indicatif et utilisées par du personnel qualifié techniquement, toujours sous sa responsabilité et/ou risques. JIOrings n'assumera aucune responsabilité quant à une utilisation erronée des données et des informations. De plus, ce rapport ne peut être utilisé pour enfreindre les lois et/ou les brevets en vigueur. Enfin, nous soulignons que les résultats obtenus sur des produits finis peuvent être relativement différents de ceux obtenus en laboratoire sur des échantillons.

Test Certificate

This document certifies that compound

EVOLAST PN9LT

meets the requirements of

NORSOK M710 [Rev. 2, October 2001] in respect of rapid gas decompression resistance in 10 mol% carbon dioxide at 150 bar and 100°C

Test gas: 90/10 mol% CH₄/ CO₂
Test temperature: 100 °C
Test pressure: 150 bar
Decompression rate: 19.6 bar/minute
Passed by: Luke Shield
Date: 24th September 2014

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 manufactured by MCM SpA, in compound **Evolast PN9LT** have been subjected to a multi-cycle RGD test under the conditions detailed below.

Seal Conditions

O-rings details: -	Compound	Evolast PN9LT
	Size	BS1806 size 312
	Section diameter	5.40 mm, nominal; 5.33 mm, actual (radial)
	Internal diameter	15.34 mm, nominal; 15.24 mm, actual
	Groove fill	86%, calculated

Test Gas

10 mol% CO₂ in methane; certified.

Procedure and Test Conditions

For each test cycle the following procedure and conditions applied:

- 1) the assembly was heated to 100°C and this temperature maintained throughout
- 2) a pressure of 150 bar, using the test gas, was applied
- 3) this pressure was maintained for 72 hours minimum (cycle 1)
- 4) gas was vented in 7.5 minutes at a constant rate of ca20bar/min from 150 bar to atmospheric
- 5) after 1 hour, test pressure was re-applied, for 24 hours (cycle 2)
- 6) subsequent cycles (3-10) were of duration 24 hours.

After the test, each of the three replicate test O-rings was quartered and the exposed surfaces rated according to Table B.2 in the NORSOK M 710 Rev 2 standard:

NORSOK Rating for O-rings from MCM SpA test seal

Compound	Summary rating (average of three)	PASS/FAIL
Evolast PN9LT	3333	PASS

Summary

Evolast PN9LT O-rings meet the RGD acceptance requirement given in the NORSOK M-710 standard [Rev. 2, October 2001]. This acceptance applies at all pressure and temperature combinations up to the levels employed above, and only for the groove geometry employed in testing.

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