

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> |
|---|--|--|---|---|
| 0769 | FFKMN9EX-122920 | FFKM Evolast® N9EX <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) |
|--|---------------|---|------------------------------------|
| | -15 °C | +320 °C | +340 °C |

| | | | | |
|--------------|--|--|--|--|
| REACH | | | | |
|--------------|--|--|--|--|

| | |
|--|--------------------------------------|
| Conforme <i>In accordance with</i> <i>Conforme à:</i> | Norsok M710 BS EN ISO 23936-2 |
|--|--------------------------------------|

| 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 | 1,98 +/-0,03 | g/cm ³ |
| Resistencia a la tracción <i>Tensile strenght</i> <i>Résistance à la traction</i> | ASTM D 1414 | 20,6 | MPa |
| Alargamiento a rotura <i>Elongation at break</i> <i>Allongement à la rupture</i> | ASTM D 1414 | 110 | % |
| 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 | 18 |
| | | | | % |

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O-rings in compound

evolast[®] N9EX – PN9EX

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: | 21.5 bar/minute |
| Seal Size: | 312 (ISO 3601-1/AS 568) |

Allen Madamombe

Scientist

17th February 2016

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 **evolast® N9EX – PN9EX** supplied by MCM have been subjected to a multi-cycle RGD test under the conditions detailed below.

| RGD TEST COMMISSIONED BY | | |
|--|---|--|
| MCM | | |
| SEAL COMPOUND DETAILS | | |
| Seal Manufacture | MCM | |
| Supplied by | MCM | |
| Compound name/number/reference | evolast® N9EX – PN9EX | |
| Elastomer type to ASTM D1418 | EVOLAST® | |
| 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 | 25.35 |
| Groove OD | mm | 15.98 |
| Groove width | mm | 5.66 |
| Squeeze (average) | % | 12.34 |
| 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 |
| OVERALL RATING | PASS | |
| GENERAL | | |
| Test laboratory | Element Materials Technology, Hitchin, U.K. | |
| Test date | 4 th February 2016 to 12 th February 2016 | |
| 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 Hitchin, UK | |

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