Rig Technologies

13-10M HNBR NOV Spherical BOP Packing Element

Engineered for thermal stability in corrosive drilling conditions

The HNBR 13-10M HT spherical BOP packing element is engineered to thrive in high-temperature, aggressive drilling fluid environments—delivering exceptional durability and dependable sealing performance when it matters most. Built for demanding operations, it helps extend equipment life and keep performance strong in the toughest conditions.

Specifications

API 16A 4th Performance Rating	PR2
API Temperature Rating	EDF 30°F 240°F 350°F
API 16A Ambient Temp Fatigue	200[1] Cycles (1,400[1] closures)
API 16A Continuous Temp Fatigue	150[1] Cycles (600[1] closures) @ 160°F 34 Cycles (136 closures) @ 210°F 15 Cycles (60 closures) @ 240°F
API 16A Extreme Temp Test	24[1] hour hold @ 350°F
Long Duration Temperature Test	28[1] Cycles (112 closures) @ 160°F over a 28-week period – NO DAMAGE
Additional Ambient Fatigue Tests	4" DP: 44 Cycles (305 closures) @ 7,500 psi
Technical Data Sheet	19345948-DAS
Part Number	19261464-001

[1]Indicates testing did NOT end due to a pressure failure, but due to time constraints.
*All testing performed at 10,000 psi wellbore & on 5" DP unless otherwise indicated.

Features and Benefits

- Advanced HNBR Performance: HNBR technology delivers a significant upgrade over traditional NBR elastomers, especially in high-temperature and harsh drilling environments.
- Superior Resistance: Unlike standard NBR, which can harden and lose performance under extreme heat, this advanced HNBR formulation resists thermal degradation, H_2S exposure, and aggressive wellbore chemicals while maintaining excellent oil and fluid resistance.
- Greater Reliability in the Field: Operators benefit from longer packing element life, dependable sealing performance in sour and high-temperature wells, and reduced risk of premature seal failure during critical operations.

Field Simulation Testing:

Simulating field conditions, we tested the HNBR packing element under continuous exposure to 160°F oil for more than 28 weeks. We also subjected the element to weekly API 16A high-temperature fatigue testing throughout the evaluation period. At the conclusion of the test, the element showed virtually no physical damage and continued to perform with exceptional reliability and sealing performance.

Under the same conditions, an equivalent NBR element failed within 19 weeks, exhibiting severe elastomer embrittlement and material breakdown.

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