Product Data Sheet

EnDura® Z97M

High performance RGD resistant HNBR for the oilfield industry

Description

Z97M is a peroxide-cured, Rapid Gas Decompression (RGD) resistant HNBR compound.

Z97M provides good chemical resistance to sour gas (H_2S), crude oil, lubricating agents, and oil additives, with superior resistance to carbon dioxide, water, drilling mud and amine corrosion inhibitors.

The EnDura® range of elite materials has been specifically developed for rapid gas decompression resistant in downhole, surface and subsea oilfield equipment.

Key Attributes

- Excellent Rapid Gas Decompression Resistant
- Tested to **RGD ISO23936-2**
- Tested to sour (H_2S) fluid **API 6A (ISO 10423:2009 F.1.13.5.2)**
- Improved mechanical strength than standard HNBR
- Good chemical resistance especially to oil and fuel
- High hardness and modulus without overly compromising EOB

Typical Applications

- Low temperature and high pressure environments
- Exploration and drilling equipment
- Subsea valves and pumps
- Blow-out preventers (BOPs)
- Rotary lip seals
- Packers
- Cup Seals

Other materials in this range

EnDura® V91A (-51°C / -60 °F)
EnDura® V91K (-41°C / -42°F)
EnDura® V91J (-18°C / -1°F)
EnDura® A90H (TFE/P)

Typical Material Properties

Property	ASTM	ISO	Value
Material Type	HNBR	HNBR	Med ACN
Colour			Black
Hardness: (Shore A)	D1415	ISO48	94
Tensile Strength (MPa)	D412	ISO37	28
Elongation at break (%)	D412	ISO37	110
Modulus @ 50% (MPa)			18.0
Modulus @ 100% (MPa)			24.0
Compression Set: 22 hrs @ 150°C (302°F) 70 hrs @ 150°C (302°F)	 D395 D395	 ISO815 SO815	 15% 20%
Heat Resistance: 70 hrs @ 150°C (302°F) Hardness change (°IRHD) Tensile strength change (%) Elongation at break change (%)	 D573 D1415 D412 D412	 ISO188 ISO48 ISO37 ISO37	 +2 +8 -20
Glass Transition: Tg (mid point)	D3418		-23°C (-9.4°F)
Minimum Operating Temperature			-29°C (-20°F)
Maximum Operating Temperature			+180°C (+356°F)

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