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Material Data Sheet F800-B85-RGD

FPM-F800-RGD-black (peroxide cross linked)

General

F800-B85-RGD is a black fluorocarbene rubber, with excellent physical characteristics and chemical resistance to the most common hydraulic fluids, sour oils/gases (H₂S) and crude oils. F800-B85-RGD has been optimized to withstand the risk of rapid gas decompression (RGD) or explosive decompression (ED) which is an essential demand in the oil and gas industry.

Physical properties

| | | | | |
|-----------------------------------|-----------|-------------------|-------|-------|
| Density: | DIN 53479 | g/cm ³ | 2,0 | ±0,03 |
| Hardness at 23°C: | DIN 53505 | Shore A | 86 | ±3 |
| 100% Modulus: | DIN 53504 | N/mm ² | 8,5 | * |
| Tensile strength: | DIN 53504 | N/mm ² | 12,5 | * |
| Elongation at break: | DIN 53504 | % | 240,0 | * |
| Tear resistance: | DIN 53515 | kN/m | 28,2 | * |
| Rebound resilience: | DIN 53512 | % | 8,0 | * |
| Compression set, 22h, 175°C, 25%: | DIN 53517 | % | 19,9 | * |

* mentioned values are subject to a tolerance of +/- 25%

Temperature range: -30°C to 210°C

Chemical resistance

Resistant to: HFD-S and HFD-R Fluid, Mineral Oils, Vegetable Oils, Silicone Oils, Biodegradable Oils, Hydrocarbons, Alcohols, Diesel, Gasoline, Fuels, Ozone, Oxygen, Air up to 200°C

Not Resistant to: Steam

Main application

Static and dynamic seals (standard and special), wipers, O-rings, flange seals, rotary seals, rubber energizers (preload elements). Applications where high temperature and/or chemical resistance is required.

Rapid Gas Decompression (RGD) validation:

The compound F800-B85-RGD-A has passed the RGD test at Element UK with a rating of 1000. Test conditions, according Norsok M-710, were 8 decompressions cycles with 90% Methane + 10% Carbon dioxide gas at 100° C and 150 bar test pressure. A certificate is available on request.