

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	2,26
Hardness at 20°C:	DIN 53505	Shore A	85 ±5
Tensile strength:	DIN 53504	N/mm ²	6,8 ±15%
Tear strength, trouser test	ISO 34-1A	kN/m	7,8
Elongation at break:	DIN 53504	%	305 ±20%
Modulus 100%:	DIN 53504	N/mm	4,4 ±30%
Compression set: 24h/175°C	DIN 53517A	%	21,5 ±20%
Min. service temperature:		°C	-30
Max. service temperature:		°C	210

Chemical resistance

Water up to 90°	S	Biodegradable oils	R
Steam	U	Hydrocarbons	R
HFA, HFB, HFC Fluids	S	Alcohols	R
HFD-S, R	R	Diesel, Gasoline, Fuels	R
Mineral oils	R	Ozone, Oxygen	R
Vegetable oils	R	Air up to 200°	R
Silicone oils	R		

Key to chemical resistance: R = resistant S = suitable U = unsuitable

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 has passed the RGD test at MERL UK with the highest possible rating of 0000.

Test conditions, according Norsok M-710, were 10 decompressions cycles with 90% Methane + 10% Carbon dioxide gas at 100° C and 150 bar test pressure. A certificate is available on request.

Analysis and Evaluation

The mentioned properties are only valid for test pieces of the corresponding ISO, DIN and ASTM standards. They cannot be directly related to seals, gaskets and other sealing products and should be used only as a general guide.