Material Data Sheet FPM-black F111 (bisphenol cross linked)

General

F111-B85 is a black Fluorocarbon elastomer, commonly referred to as VITON® and FPM. FPM materials have a very high resistance to hydraulic fluids, chemicals and a number of organic compounds and operate in temperatures between -25 to +210°C. F111-B85 is recommended for applications where its outstanding resistance to heat, chemicals, weathering and ozone is required.

Physical properties

Density:	DIN ISO 1183-1	g/cm³	1,86±0,03
Hardness at 23°C:	DIN ISO 7619-1	Shore A	85 ±5
100% Modulus:	DIN 53504	N/mm²	7,5 *
Tensile strength:	DIN 53504	N/mm²	11,6 *
Elongation at break:	DIN 53504	%	211,6 *
Tear resistance:	DIN ISO 34-1 B/b	N/mm	20,4 *
Rebound resiliance:	DIN 53512	%	10 *
Compression set, 24h, 70°C, 25%:	DIN ISO 815-1	%	11,5 *
Compression set, 24h, 100°C, 25%:	DIN ISO 815-1	%	10,5 *
Compression set, 24h, 175°C, 25%:	DIN ISO 815-1	%	16,5 *

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

Temperature range: -25°C to 210°C

Chemical resistance

Resistant to: HFD-S, HFD-R Fluids, 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.

Analysis and Evaluation

Values mentioned above are based on several tests performed during development and production of the material. Tests have been performed on standard test pieces specified within the relevant standard within the laboratory. Tests performed on any other pieces which are not related to the corresponding standard or made out of any (semi)finished part or any other part deviating in production process, dimension or age of the material from above may result in different values. The data represents our present empirical values and does not disengage the end user from their obligation to examine the usage of the material for each specific application.

We reserve the right to update this data sheet from time to time if new empirical values are available. Errors and omissions excepted.

SEALCO INTERNATIONAL LTD
Sealco House, Maypole Fields Halesowen, West Midlands, UK, B63 2QB
T: (+44)1384 413058 E: sales@sealco.co.uk W: www.sealco.co.uk