

## **Material Data Sheet F109-BR85 (genuine VITON\*)**

### **FPM F109 – brown (bisphenol cross linked)**

#### **General**

F109-BR85 is a brown 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 -20 to +210°C. F109-BR85 is recommended for applications where its outstanding resistance to heat, chemicals, weathering and ozone is required.

#### **Physical properties**

Density:	DIN 53479	g/cm <sup>3</sup>	2,44
Hardness at 20°:	DIN 53505	Shore A	85 +/-5
Tensile strength:	DIN 53504	N/mm <sup>2</sup>	11,7 +/-15%
Elongation at break:	DIN 53504	%	154 +/-20%
Modulus 100%:	DIN 53504	N/mm	8,8 +/-30%
Tear strength	DIN 53507B	N/mm	4,2
Compression set: 70h/RT	DIN 53517A	%	14,1 +/-20%
Compression set: 22h/70°C	DIN 53517A	%	9,4 +/-25%
Compression set: 22h/100°C	DIN 53517A	%	6,0 +/-25%
Compression set: 24h/175°C	DIN 53517	%	9,4 +/-25%
Min. service temperature:		°C	-20
Max. service temperature:		°C	210
Short time max. service temp. in air:		°C	280

#### **Chemical resistance**

Water up to 90°	S	Biodegradable oils	R
Steam	U	Hydrocarbons	R
HFA, HFB, HFC Fluids	S	Alcohols	U
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 temp. and/or chemical resistance is required.

#### **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.

\*) VITON is a reg. Trademark of Du Pont Co./U.S.A.