

Material name, short description	FKM
Material name, based on technical standards	Fluorine elastomer
Material description / intended use	Fluoroelastomer with high heat resistance and broad chemical resistance.
Color	black
Compound code	FKM 75.16-04
Crosslinking/curing agent	bisphenol
Manufacturing process	moulded parts

**Mechanical properties**

Hardness nominal	70 ±5 Shore A ASTM D 2240
Density nominal	1.9 ±0.02 g/cm <sup>3</sup> ISO 2781-A
Tensile strength	13.5 N/mm <sup>2</sup> DIN 53504
Elongation at break	190 % DIN 53504
Modulus 100%	6 N/mm <sup>2</sup> ASTM D 412
Compression set	19 % ASTM D 395-B 168 h, 150 °C
	18 % ASTM D 395-B 22 h, 200 °C
	22 % ASTM D 395-B 70 h, 200 °C
	84 % ASTM D 395-B 72 h, -20 °C

**Thermal properties**

Operating temperature min.*	-25 °C
Operating temperature max.*	200 °C
TR 10 value	-17 °C

\* Approximate value, dependent on the application

**Storage in medium 1**

Medium	IRM 903 Oil (ASTM 3)
Test parameter	168 h, 70 °C
Test standard	ISO 1817
Value change	Hardness: -0.5 Points Volume: +0.7 % Weight: +0.3 %

**Storage in medium 2**

Medium	ASTM Fuel C
Test parameter	70 h, 23 °C
Test standard	ISO 1817
Value change	Hardness: +2 Volume: +1.6 % Weight: +0.5 %

**Storage in medium 3**

Medium	ASTM Pentane
Test parameter	168 h, 40 °C
Test standard	ISO 188
Value change	Weight: -0.5 %

**Storage in medium 4**

Medium	ASTM Fuel B
Test parameter	168 h, 40 °C
Test standard	ISO 188
Value change	Hardness: -0.5 Points Volume: +0.5 % Weight: +0.1 %

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

## Storage in medium 5

Medium	ASTM Fuel B
Test parameter	96 h, 70 °C
Test standard	ISO 188
Value change	Hardness: -0.5 Points Volume: +0.3 % Weight: +0.2 %

## Air aging 2

Test parameter	168 h, 70 °C
Test standard	ISO 188
Value change	Hardness: +1 Points Tensile strength: +4.11 % Elongation at break: +9.66 %

## Air aging 1

Test parameter	168 h, 150 °C
Test standard	ASTM D 2240
Value change	Hardness: +1 Points Tensile strength: +2 % Elongation at break: +6 %

## Approvals / Compliance

Food & Beverage	FDA CFR 21 - 177.2600 "Rubber articles intended for repeated use" a) - f)
	BfR XXI Category 4
	D.M. 21/03/1973 (Migration test)
	Dlgs. 25.01.1992 n.108 Art.2 (ex. DPR 777/82 art 2) - Complies with Arsenic content limits
	Regulation EC 1935/2004 (excl. article 15) and EC Regulation 2023/2006 (GMP)
	GB 4806.11-2016 (Migration test)
Medical / Pharma	USP Class VI Chapter <87> (In Vitro) and Chapter <88> (In Vivo) - 121°C
Oil & Gas	BAM maximum temperature 150 °C, maximum oxygen pressure 25 bar
	DIN EN 16678: 2016-02
	DVGW CERT ZP 5101:2021-12 H <sub>2</sub> mean permeability 164 (cm <sup>3</sup> x mm) / (m <sup>2</sup> x 24 h x bar) / 23°C
	DVGW EN 549 D1/H3
Specific substance statements	ADI free (free of Animal Derived Ingredients) resp. TSE/BSE related substances
	PAH Class 2 (AfPS GS 2019:01)



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