

Fits perfectly for "cleaning in place" applications

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	blue
Compound code	FKM 75.501-04
Crosslinking/curing agent	Peroxide
Manufacturing process	moulded parts

Mechanical properties

Hardness nominal	75 ±5 Shore A ASTM D 2240
Hardness	73 Shore A ASTM D 2240
Density nominal	1.97 ±0.02 g/cm ³ ASTM D 297
Tensile strength	23 N/mm ² ASTM D 412
Elongation at break	360 % ASTM D 412
Compression set	17 % ASTM D 395-B2 70 h, 150 °C
	19.6 % ASTM D 395-B2 22 h, 200 °C
	43.5 % ISO 815-1B 22 h, 150 °C
	64 % ISO 815-1B 22 h, 200 °C
Tear resistance	8.8 N/mm ISO 34-1A

Thermal properties

Operating temperature min.*	-15 °C
Operating temperature max.*	200 °C
TR 10 value	-5.5 °C ASTM D 1329
Glass transition temperature	-4.5 °C ISO 11357-2

* Approximate value, dependent on the application

Storage in medium 1

Medium	IRM 903 Oil (ASTM 3)
Test parameter	70 h, 150 °C
Test standard	ASTM D 471
Value change	Hardness: -1.0 Points Tensile strength: -3.5 % Elongation at break: +2.5 %

Storage in medium 2

Medium	ASTM Fuel C
Test parameter	70 h, 40 °C
Test standard	ASTM D 471
Value change	Hardness: -4.0 Points Volume: +5.0 %

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.

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Storage in medium 3

Medium	M 15
Test parameter	70 h, 40 °C
Test standard	ASTM D 471
Value change	Hardness: -9.0 Points Volume: +14 %

Storage in medium 5

Medium	Steam
Test parameter	168 h, 200 °C
Test standard	ISO 1817
Value change	Hardness: -2.0 Points Tensile strength: -25.0 % Elongation at break: -2.0 % Volume: +3.0 % Weight: +1.3 %

Air aging 1

Test parameter	168 h, 200 °C
Test standard	ISO 188
Value change	Hardness: +0.5 Points Tensile strength: +4.0 % Elongation at break: -3.4 %

Storage in medium 4

Medium	ATF DEXRON
Test parameter	168 h, 150 °C
Test standard	ASTM D 471
Value change	Hardness: -2.0 Points Tensile strength: -16 % Elongation at break: -21 % Volume: +3.5 %

Storage in medium 6

Medium	Water
Test parameter	168 h, 200 °C
Test standard	ISO 1817
Value change	Hardness: -2.5 Points Tensile strength: -11.5 % Elongation at break: -2.0 % Volume: +6.0 % Weight: +3.0 %

Air aging 2

Test parameter	70 h, 250 °C
Test standard	ASTM D 573
Value change	Hardness: -1.0 Points Tensile strength: -18 % Elongation at break: +10 %

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Approvals / Compliance

Food & Beverage	3-A Sanitary Standard N°18-03 Class I
	FDA CFR 21 - 177.2600 "Rubber articles intended for repeated use" a) - f)
	BfR XXI Category 4
	BNIC (Bureau National Interprofessionnel de Cognac)
	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
	French Arrêté 05/08/2020 (Migration test)
	KIWA NSF/ANSI 51 formulation
	LFGB §30/31
	Regulation EC 1935/2004 (excl. article 15) and EC Regulation 2023/2006 (GMP)
	SR 817.023.21
	GB 4806.11-2016 (Migration test)
	Mercosur GMC/RES N°54/97 (Migration test)
Medical / Pharma	USP Class VI Chapter 87 (In Vitro) and Chapter 88 (In Vivo) -121 °C
Oil & Gas	BAM max. temp. 60°C, max. oxygen pressure 50 bar & max. temp. >60 to 150 °C, max. oxygen pressure 30 bar
	DVGW CERT ZP 5101:2021-12 H ₂ mean permeability 489 (cm ³ x mm) / (m ² x 24 h x bar) / 23°C
Specific substance statements	ADI free (free of Animal Derived Ingredients) resp. TSE/BSE related substances
	PAH Class 1 (AfPS GS 2019:01)



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