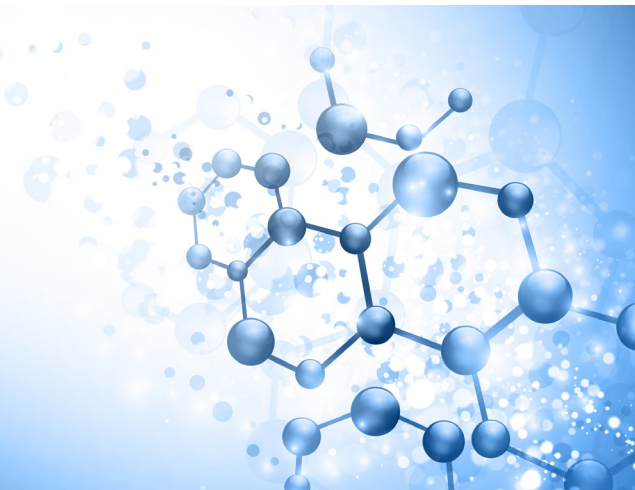


# PERTEC® UP FKM



In many industries the requirements for high tech materials become more and more demanding. Where the automotive industry has a great need for low permeability and good abrasion resistance, the oil drilling industry demands high elongation and hardness and for the electronic and food industry FDA compliance and low release of metal ions is essential. Staying competitive means keeping up with the newest technology and adapt to the according new challenges.

Angst+Pfister developed and produced with PERTEC® UP FKM, UP meaning „Ultra Pure“, a new high tech compound within the PERTEC® family that is especially designed for applications where the pureness of the material is absolutely essential.

This is especially the case within the food, pharma and medical industry where the human health can directly be affected. Therefore in those areas only material can be used that does not emit any substances or material that can contaminate its surroundings. To guarantee health compatibility all materials need to comply with numerous international regulations.

The formulation of this outstanding compound was accordingly defined respecting almost all food contact and drinking water regulations worldwide. All used substances are listed in European and US food regulations.

## Features

- Good mechanical properties within the wide temperature range of -20 up to +200°C
- Complies with almost all food contact and drinking water regulations worldwide
- For static and dynamic applications
- Crosslinking agent: peroxide

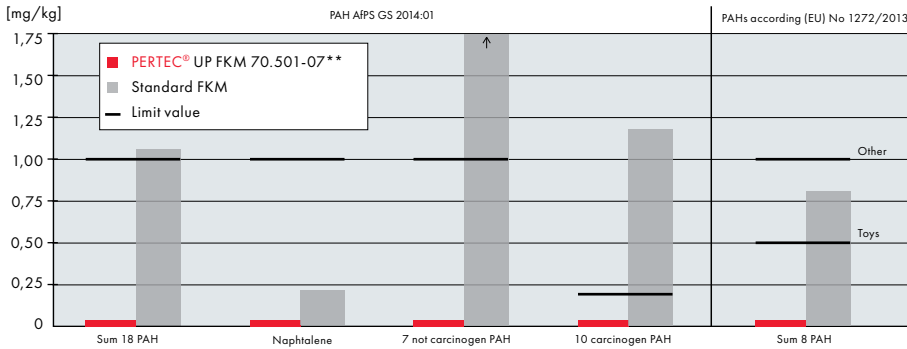
## Benefits

- Black FKM compound that complies with PAH Category 1
- Good mechanical properties
- Broad chemical resistance
- High purity

### Our contact details

Angst+Pfister AG, Switzerland  
Phone: +41 (0)44 306 61 11  
engineering@angst-pfister.com  
www.angst-pfister.com

## PERTEC® UP FKM performance\*



### Comparison Technical Data

	PERTEC® UP FKM 70.501-07	Standard FKM
Density	1,92 g/cm <sup>3</sup>	2,07 g/cm <sup>3</sup>
Hardness	70 Shore A	70 Shore A
Tensile strength	20,2 MPa	7 MPa
Elongation at rupture	316%	125%

	Limit value category 1	Limit value category 2		Limit value category 3	
PAH A/FPS GS 2014:01	Materials intended to be put in the mouth, or materials of toys with intended long-term skin contact (longer than 30s)	Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or repeated short-term skin contact		Materials not covered by category 1 or 2 with foreseeable skin contact up to 30 seconds (short term skin contact)	
		Toys	Other products	Toys	Other products
10 carcinogen PAH	< 0,2 mg/kg	< 0,2 mg/kg	< 0,5 mg/kg	< 0,5 mg/kg	< 1 mg/kg
	Limit value for each one of the 10 carcinogen PAH-Single substance				
7 not carcinogen PAH	< 1 mg/kg	< 5 mg/kg	< 10 mg/kg	< 20 mg/kg	< 50 mg/kg
	Sum limit value of the 7 not carcinogen PAH				
Naphtalene	< 1 mg/kg	< 2 mg/kg		< 10 mg/kg	
18 PAH	< 1 mg/kg	< 5 mg/kg	< 10 mg/kg	< 20 mg/kg	< 50 mg/kg
	Sum limit value of all 18 PAH's				

\*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.

\*\*Bars for illustrative purposes only: none of the values exceed 0.025 mg/kg

## Certificates

PERTEC® UP FKM complies with almost all food contact, pharma and medical regulations worldwide.

3-A Sanitary Standard Number 18-03 Class I	LFGB § 30/31
ADI free	Mercosur GMC 54/97 (migration test)
BAM approved maximum temperature 150 °C, maximum oxygen pressure 30 bar	PAH Category 1 (A/FPS GS 2014:01)
BfR XXI (Natural and synthetic rubber) Category 4	PAHs requirements according Regulation (EU) No 1272/2013
BNIC (Bureau National Interprofessionnel du Cognac)	Phthalate free
Dlgs. 25.01.1992 n.108 Art. 2 Parte D	SR 817.023.21
D.M. 21/03/1973 (Migrations test only)	UBA Elastomer Guideline for cold and hot water up to 85°C
DVGW W 270	WRAS (BS690) for drinking water cold and hot water up to 85°C
EC 1935/2004 article 3	USP Class VI chapter 87 and 88, 121 °C
FDA - CFR 21 - 177.2600 food a) - f)	
French Arrêté 05/08/2020 (migration test)	
GB 4806.11-2016	
KIWA NSF/ANSI 51 formulation	

Moreover due to the high purity of the material also many other regulations can be fulfilled like for example NSF 61 for drinking water.

Industries/Segments	Typical Products
Pharma 	O-rings Moulded parts Membranes
Chemical 	
Food & Beverage 	
Medical 	
Drinking water 	