

FKM black

Color - black

FKM black – fluoropolymer elastomer, also known as FKM brown.

This material has similar characteristics than FKM brown: resistance to high temperatures, different chemical ingredients, weathering, ozone and hot air.

FKM black is compatible with mineral oils, HFD hydraulic fluids, raw petroleum and sour gas. Temperature range: from -20°C up to +220°C.

Resistance

Good resistance	Medium resistance	Low resistance
Mineral oils	Hot water	–
Aliphatic hydrocarbons (propane, butane, petrol)	–	skidrol 500
Silicone oil and grease	–	ammonia, amines, alkali
Adipose and vegetable oils and grease	–	Hot steam
Fuels	–	Low-molecular organic acids (acetic and formic acids)
Oils with soot and highly aromatic oils	–	Hydrofluoric acids, chlorosulfonic acids.
Fire-resistant hydraulic fluids HFD-S, HFD-R	Fire-resistant hydraulic fluids HFA, HFB, HFC	Polar solvents (acetone, methyl ethyl ketone, dioxane, ethylacetate)
Biodegradable hydraulic fluid	–	Brake fluids based on glycol
Aromatic hydrocarbon (toulene, benzol)	–	–

Application

FPM black can be used for production of U-shaped seals, chevron seals, wipers and non-standard seals. FKM black is mainly used in cases with temperature and chemical stress. Also it is used in hydraulic systems with fire-resistant hydraulic fluids HFD.

Mainly used

- Non-standard seals in chemical industry and thermal engineering in metallurgy
- Rotary shaft seals
- O-rings
- Hydraulic seals for HFD-fluids

FKM Material Data Sheet

Properties	Value	Unit	Standard
Hardness	83 +/-3	Sh A	DIN 53505
Density	1,80	g/cm ³	DIN EN ISO 1183
Compression set 175°C / 24 h	8	%	DIN ISO 815
Rebound resilience	9	%	DIN 53512
Tensile strength	11,2	MPa	DIN 53504
Elongation at break	202	%	DIN 53504
Tear strength	7,1	N/mm	DIN ISO 34-1 A
Abrasion	---	mm ³	DIN 53516
Min. service temperature	-20	°C	
Max. service temperature	+220	°C	