KAFLON®

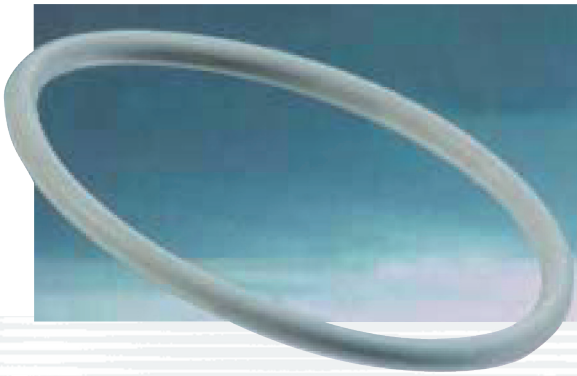
The perfluoroelastomer
that includes
performance service price

the smart one

mi™

Background

GMI, in the two year period from 2001 to 2002, has conducted a research that involved some chemical industries and the physics-chemistry department of the University of Milan and Alessandria for the development and manufacturing of a new generation perfluoroelastomer (FFKM) compound.
The design specifications required that the new material could cover the widest spectrum of applications and in the meantime could allow production cost reduction compared with other perfluoroelastomer products currently available on the market.



The result is Kaflon®

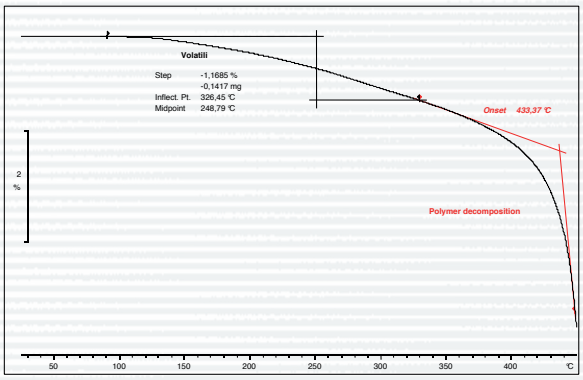
Performance

KAFLON® like other perfluoroelastomers, is based on a perfluoridated tetrafluoroethylene copolymer that includes **the chemical resistance of PTFE and the softness and elasticity of rubber. Kaflon®** has shown resistance performances equal, if not superior to the best perfluoroelastomers known to date. It actually possesses unique properties of elasticity, de-formability and compatibility to both inert and chemically aggressive substances. Besides there are other special versions of **Kaflon®**, that include additional strengthening agents still maintaining outstanding elastic properties, with extreme hardness for harsh applications, at top or bottom temperatures and pressures (such as oil&gas, AED and pharma).

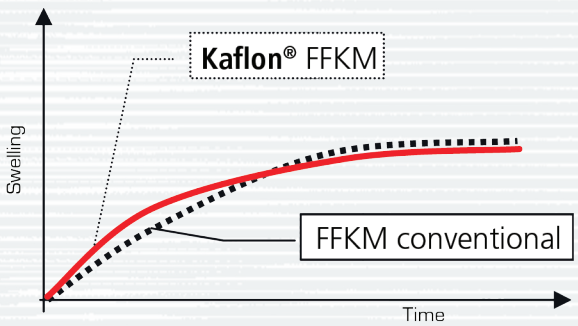
Service

Fluortecno offers delivery times that range from prompt delivery for standard products to the expedite manufacturing of customized items. Fluortecno's technical department is at customer's disposal to study customized solutions and compounds for the manufacturing of gaskets and other **Kaflon®** elements realized from customer's drawing or sample, customized compounds and extreme hardness.

TGA kaflon® 760N



Swelling in toluene at 40°C for 168 h on a painting rig.



KAFLON®

			760N	620W	725L	790P
Hardness Shore A	ASTM	[p.ti]	74,00	76,00	73,00	72,00
Specific weight	ASTM	[g/cm3]	2,00	2,30	1,95	2,00
100% Module	ASTM	[MPa]	14,60	16,50	10,80	11,80
Ultimate elongation	ASTM	[%]	246,00	289,00	163,00	168,00
Compression set, % hrs. 22 at 200°C	ASTM		32,90	33,50	27,60	11,50
Max. operating temperature	ASTM	[°C]	280,00	280,00	280,00	310,00
Min. operating temperature	ASTM	[°C]	-5,00	-5,00	-25,00	-3,00
Colour	ASTM		BLACK	WHITE	BLACK	BLACK
Indicated for foodstuff/FDA approved	ASTM		NO	Yes	NO	NO

Thermal properties

Ageing in air at 200°C for 168h [ASTM D573]

• Hardness ShA	+2,5
• Breaking load	+24,0%
• Ultimate elongation	+13,5%

Ageing in MEK at 23°C for 168h

• Hardness ShA	-0,5%
• Breaking load	-14,3
• Ultimate elongation	+10,0%

Ageing in water at 100°C per 168h [ASTM D471]

• Volume	0%

Chemical compatibility*

Acids	Nitric, Sulphuric, Acetic 118°C, Hydrofluoric 48%, etc.
Bases (i.e. KOH) et organic amines	Potassium hydroxide, Sodium hydroxide, Aniline, Ethylenediamine, etc.
Esters	Butyl acetate 125°C, Ethyl acetate, Methyl acetate, Metoxypropanol acetate (PMA)
Alcohols	Isopropyl, Methanol, Phenol 100°C, etc.
Ethers	Tetrabydrofuran 20°C, MTBE
Aromatic Hydrocarbons	Benzene, Toluene, ASTM Fuel C/ Methanol, ETBE
Mineral and synthetic oils	ASTM Oil #3, Skydrol 500B
Ketones	Methyl ethyl ketone (MEK, Dicholoropropane), Acetone
Solvents	Percloroethylene, Methylene Chloride, Nitro Solvents (incl. Xylene and Methyl alcohol), Aggressive chlorinated solvents, Acetone 20°C, DMF 20°C, etc.
Special applications	Geothermal steam at 270°C, Diethyl-amine, melted PP, paint nozzles

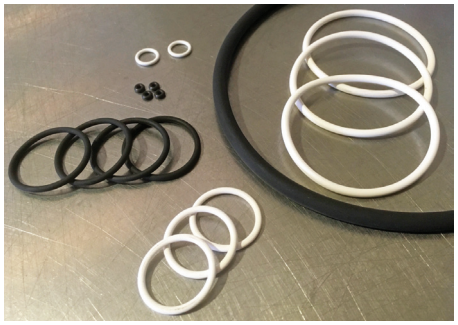
**This table is believed reliable and is made available for use by technically skilled persons. The table does not provide guarantee of accuracy or suitability for any purpose for the use of Kaflon® on industrial plants.*
For more specific information on Kaflon's® compatibility contact Fluortecno personnel directly.

Compounds KAFLON®

KAFLON®	Colour	Properties	FDA/Approved
720B	White	Basic compound for all-purpose applications, good mechanical properties, good elasticity, good chemical resistance, excellent quality/price ratio.	Yes
810N	Black	Carbon Black strengthened compound, good mechanical properties, good elasticity, good chemical resistance, AED approved. Oil&Gas valves, excellent quality/price ratio.	No
800C	Black	Compound specifically aimed for industrial applications at very low temperatures.	No
790P	Black	High fluorine content compound, high compression-set at high temperatures; very high chemical resistance.	No
760N	Black	All-purpose compound, excellent mechanical resistance, good chemical compatibility; 260°C max operating temperature.	No
620W	White	Compound aimed at pharmaceutical applications. Very high fluorine content, outstanding chemical resistance.	Yes
725L	Black	Compound ideal for top chemical resistance at very low temperatures, specifically designed for heat exchanger applications. Good elasticity.	No
830N	Black	Compound that offers top resistance at high temperatures and permanent deformation. Not suitable for particular alkaline metals and steam.	No

APPLICATIONS

PHARMA INDUSTRIES
MECHANICAL INDUSTRIES

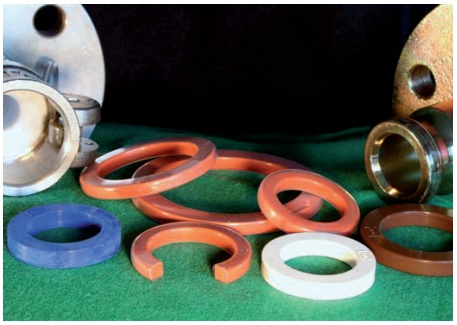


O-rings

CHEMICAL INDUSTRIES
FOOD INDUSTRIES

Bioclamp

OIL INDUSTRIES
PAINT INDUSTRIES



Camlock gasket

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ITALY

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