

FLUONOX[®]

Fluoroelastomer

KR435

Raw gum Terpolymer

Technical Information

Fluonox[®]KR435 is a medium – low viscosity terpolymer with 68.5% Fluorine content, consisting of HFP, VDF and TFE. Fluonox[®]KR435 doesn't contain curatives, it can be cured with diamine or bisphenol AF curing systems. Fluonox[®]KR435 shows the typical chemical resistance of FKM terpolymers, thus it is used where better chemical resistance compared to standard FKM copolymer is required. It is suitable for compression, transfer and injection moulding of O-rings, shaft seals, valve stem seals, gaskets where good chemical resistance is required. It can also be compounded and dissolved in polar media for Coating applications.

Product features

- Excellent Chemical resistance including oxygenated fuels
- Outstanding heat resistance
- Easy soluble in polar solvents

Properties

Properties	Value	Unit	Method
Appearance	Off white slab		
Specific gravity at 23°C (73F)	1.85	gm/cm ³	ASTM D792
Mooney viscosity - ML (1+10)' at 121°C (250F)	30	MU	ASTM D1646
Solubility	Dissolves in ketone and esters		
Shelf stability at room temp.	Excellent		
Fluorine content	68.5	%	Internal NMR Method

Note – These are typical properties and not to be used for specification purpose

Packaging

Fluonox[®]KR435 is available in 25kg box.

Standard formulation of Compound

Formulation	Value		
Fluonox®KR435	100		
Bisphenol AF	2.0 phr		GFL
BTPPC	0.5 phr		GFL
N-990 carbon black	30 phr	Thermax N-990	Cancarb Ltd.
Magnesium oxide	3 phr	Kyowamag 150	Kyowa Chemical Industry Co. Ltd.
Calcium hydroxide	6 phr	OMM-2	Ohmi Kagaku Kogyo Co., Ltd

MDR 6min at 177°C (351F), arc 0.5°

Properties	Value	Unit	Method
ML	0.6	lbf x in	ASTM D6601
MH	12.0	lbf x in	ASTM D6601
ts2	4.3	min	ASTM D6601
tc50	4.8	min	ASTM D6601
tc90	5.5	min	ASTM D6601

Physical properties:

Press cure 10 min at 170°C (338F); Post cure 24 hours at 230°C (446F)

Properties	Value	Unit	Method
100% Modulus	4.5 (653)	MPa (psi)	ASTM D412
Tensile strength	13.0 (1885)	MPa (psi)	ASTM D412
Elongation at break	230	%	ASTM D412
Shore A Hardness	73	Points	ASTM D2240

Compression Set: 70 hours at 200°C (392°F)

Properties	Value	Unit	Method
Compression Set	23	%	ASTM D395 Method B

Note- The values of properties mention in technical data sheet are tested with proprietary materials listed above. Equivalent chemicals can also be used, however under such case; there may be little variation in the value of properties.

Safety and Handling

Handling and processing of fluoroelastomer must be done in ventilated areas to prevent personnel exposure to the fumes liberated during curing or use of cured rubber at high temperature. During the process, some fumes may generate at high temperature which are harmful for human beings. Fumes should not be inhaled; eye and skin contact must be avoided. In case of skin contact flush skin with cold water immediately. In case of eye contact, flush with water immediately and seek medical help. Smoking tobacco or cigarettes should not be allowed in working area. Mixing agents that contain metallic particulate such as powdered aluminium can rapidly decompose at high temperature; therefore do not use metallic particulate as mixing agent. Fluoroelastomer should be stored away from heat. It should be kept in clean and dry area where it can be protected until it is used. Please read the Material Safety Data Sheet before handling the product.

Disclaimer

FLUONOX® is the brand name of Gujarat Fluorochemicals Limited (GFL) used for its brand of fluoroelastomer. FLUONOX® can be used in applications duly approved by GFL. Customers who plan to use the word FLUONOX® as the trade mark on or relation to their own fluoroelastomer parts and other products in any style or combination or in any manner whatsoever must contact GFL for prior permission for such use. No consumer/user of GFL fluoropolymer resin is permitted to claim that their products contain FLUONOX® without prior permission from GFL.

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Note warning

Do not use any of FLUONOX® Fluoroelastomer in medical devices that are designed for permanent implantation in the human body. For other medical uses, prior permission of GFL may be sought.

For more information, please contact Gujarat Fluorochemicals Limited

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