

FLUONOX[®]

Fluoroelastomer

KR470

Raw gum Terpolymer

Technical Information

FLUONOX[®] KR470 is a high viscosity terpolymer with 68.5% Fluorine content, consisting of VDF, HFP and TFE. FLUONOX[®] KR470 does not contain curatives, it can be cured with diamine or bisphenol AF curing systems. FLUONOX[®] KR470 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 and transfer moulding of shaft seals, valve stem seals, gaskets where good chemical resistance is required.

Product features

- Excellent Chemical resistance to mineral oils
- Outstanding heat resistance
- Lack of mold fouling
- Good mold release

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)	65	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[®]KR470 is available in 25kg box.

Standard formulation of Compound

Formulation	Value		
Fluonox®KR470	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	1.6	lbf x in	ASTM D6601
MH	16.0	lbf x in	ASTM D6601
ts2	3.5	min	ASTM D6601
tc50	4.8	min	ASTM D6601
tc90	5.6	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	5.0 (725)	MPa (psi)	ASTM D412
Tensile strength	14.0 (2030)	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.

The information provided in the bulletin is furnished at no cost to the recipient and is based on information and technical data that Gujarat Fluorochemicals Limited believes is correct and sound. Those who choose to use the information must be technically qualified, and do so entirely at their own cost and risk. The users must determine and insure that their specific conditions of processing present no health or safety hazards. GFL does not warranty, either expressly or impliedly in respect of use of this information for application of its FLUONOX™ branded Fluoroelastomer and shall bear no liability as a result of any loss or damage caused directly or indirectly due to use of any information provided in this bulletin. Nothing contained herein can be taken or construed as a grant of license by GFL to operate under or a recommendation to infringe any patents.

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

Corporate & Marketing office:

Inox Towers, Plot no. 17, Sector 16/A
Noida-202301, U.P., INDIA

Tel: +91-120-6149600

Fax: +91-120-6149610

Works:

12/A, GIDC Dahej Industrial Estate.

Tehsil- Vagra, Distt. Bharuch-392230

Gujarat, INDIA

Website: www.fluonox.co.in; www.gfl.co.in

Email: contact@gfl.co.in



Issue number - 02
Date of Issue – 01.01.2019