

FLUONOX[®]

Fluoroelastomer

KR545P

Peroxide curable Raw Terpolymer

Technical Information

FLUONOX[®] KR545P is a medium viscosity, high fluorine (70%) peroxide curable terpolymer. It can be cross-linked using organic peroxides in combination with coagent. FLUONOX[®] KR545P can be used for extrusion of hoses and compression, injection and transfer moulding of shaft seals, O-rings and gaskets.

Product features

- Lack of mould fouling
- Very good compression set
- Best overall chemical resistance among fluoroelastomers
- Excellent resistance in steam
- Good resistance in alcohol containing fuels

Properties

Properties	Value	Unit	Method
Appearance	Off white slab		
Specific gravity at 23°C (73F)	1.90	gm/cm ³	ASTM D792
Mooney viscosity - ML (1+10)' at 121°C (250F)	45	MU	ASTM D1646
Solubility	Dissolves in ketone and esters		
Shelf stability at room temp.	Excellent		
Fluorine content	70.4	%	Internal NMR Method

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

Packaging

Fluonox[®] KR545P is available in 25kg box.

Standard formulation of Compound

Formulation	Value		
Fluonox® KR545P	100		
N-990 carbon black	30 phr	Thermax N-990	Cancarb Ltd.
TAIC (100%)	3 phr		
Luperox #101XL45	3 phr		Arkema
ZnO	5 phr		

MDR 6min at 177°C (351F), arc 0.5°

Properties	Value	Unit	Method
ML	1.0	lbf x in	ASTM D6601
MH	30.0	lbf x in	ASTM D6601
ts2	0.50	min	ASTM D6601
tc50	0.70	min	ASTM D6601
tc90	1.25	min	ASTM D6601

Physical properties:

Press cure 10 min at 170°C (338F); Post cure 4 hours at 230°C (446F)

Properties	Value	Unit	Method
100% Modulus	9.0 (1305)	MPa (psi)	ASTM D412
Tensile strength	21.0 (3046)	MPa (psi)	ASTM D412
Elongation at break	210	%	ASTM D412
Shore A Hardness	72	Points	ASTM D2240

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

Properties	Value	Unit	Method
Compression Set	17	%	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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