

Technical Information

FLUONOX™ KB2453 is a fluoroelastomer which consist of HFP and VDF. FLUONOX™ KB2453 is Bisphenol AF cure incorporated medium viscosity fluoroelastomer. It is suitable for compression moulding. FLUONOX™ KB2453 grade is an excellent choice for making O rings.

Product features

- Fast cure rate
- Excellent compression set resistance
- Excellent scorch safety
- Better mould release
- No mould fouling
- Excellent hot tear resistance

Properties

Properties	Value	Unit	Method
Appearance	Off white slab		
Specific gravity at 23°C(73°F)	1.81	gm/cm ³	ASTM D792
Mooney viscosity (ML1+10) at 121°C (250°F)	45	MU	ASTM D1646
Solubility	Dissolves in ketone and esters		
Shelf stability at Room temp	Excellent		
Fluorine content	66	%	Internal NMR Method

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

Packaging

FLUONOX™ KB2453 is available in 25 Kg corrugated box.

Standard properties of Compound

Formulation	Value		
FLUONOX™ KB2453	100 Parts		
N-990 carbon black	30 Parts	Thermax N-990	CANCARB Ltd.
Magnesium oxide	3 Parts	Kyowamag 150	Kyowa Chemical Industry Co.Ltd.
Calcium hydroxide	6 Parts	OMM-2	Ohmi Kagaku Kogyo Co.,Ltd.

MDR 6min at 177 °C (351°F) arc 0.5°

Properties	Value	Unit	Method
ML	1.6	Lbf.in	ASTM D6601
MH	23.6	Lbf.in	
Ts2	1.6	Min	
Tc50	2.3	Min	
Tc90	3.5	Min	

Mooney Viscosity of full compound

Properties	Value	Unit	Method
Mooney viscosity (ML1+10') at 121°C	102	MU	ASTM D1646

Physical Properties:

Press cure 10 min at 170 °C (338°F)

Post cure 24 hours at 230°C (446°F)

Properties	Value	Unit	Method
100% Modulus	7.5(1088)	Mpa	ASTM D412
Tensile strength	15.0(2176°F)	Mpa	
Elongation at break	190	%	
Hardness	77	Shore A	ASTM D2240

Heat resistance: 70 hours at 250 °C (482°F)

Properties	Value	Unit	Method
Change in tensile strength	-3	%	ASTM D573
Change in elongation	-8	%	
Hardness change	+1	Shore A	

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

Properties	Value	Unit	Method
Compression set	15	%	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 aluminum 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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