FLUONOX®
Fluoroelastomer

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY

KR221F
Raw Copolymer

TECHNICAL DATA SHEET

TECHNICAL INFORMATION

FLUONOX® KR221F is a low viscosity copolymer consisting of VDF and HFP. It does not contain curatives. It can be cured with diamine or bisphenol AF curing systems. FLUONOX® KR221F shows faster cure, lower Compression set compared to standard Fluoroelastomer copolymers. It can be used in a blend with cure incorporated grades to tune crosslinking density and/or viscosity.

PRODUCT FEATURES

- Good mould release
- Fast cure
- Reduced mould fouling
- Very Good compression set

TYPICAL PROPERTIES

Test parameters	Nominal Value	Unit	Method
Appearance	Translucent	-	-
Specific gravity at 23°C (73°F)	1.81	gm/cm^3	ASTM D792
Mooney viscosity ML (1+10)' at 121°C (250°F)	20	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® KR221F is available in 25kg box.

Fluonox® KR221F

STANDARD FORMULATION OF COMPOUND

Formulation	Value		
FLUONOX® KR221F	100		
Bisphenol AF/BTPPC Salt	2.5 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 (351°F), ARC 0.5°

Properties	Value	Unit	Method
ML	0.5	lbf x in	ASTM D6601
MH	18.0	lbf x in	ASTM D6601
ts2	1.0	min	ASTM D6601
tc50	1.2	min	ASTM D6601
tc90	2.0	min	ASTM D6601

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	7.0 (1015)	MPa (psi)	ASTM D412
Tensile strength	13.0 (1885)	MPa (psi)	ASTM D412
Elongation at break	170	%	ASTM D412
Shore A Hardness	72	Points	ASTM D2240

COMPRESSION SET: 70 HOURS AT 200°C (392°F)

Properties	Value	Unit	Method
Compression Set	18	%	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.

Fluonox® KR221F

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 temperatures 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 temperatures; 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.

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.

SALES AND TECHNICAL SUPPORT

Corporate & Marketing office:
Gujarat Fluorochemicals Limited
Inox Towers, Plot no. 17, Sector 16/A
Noida-201301, U.P., INDIA
Tel: +91-120-6149600
Fax: +91-120-6149610

Works
Gujarat Fluorochemicals Limited
12/A, GIDC Dahej Industrial Estate.
Tehsil- Vagra, Distt. Bharuch-392130, Gujarat, INDIA
Website: www.fluonox.co.in; www.gfl.co.in
Email: contact@gfl.co.in

Europe
Gujarat Fluorochemicals GmbH
Esplanade 40, 9th Floor
20354 Hamburg, Germany
+49 040 5582 395- 80

Americas
GFL Americas, LLC
1212 Corporate Dr., Suite-540,
Irving, TX 75038, USA
+1 512 446 7700

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY