Technical Data Sheet

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Silfluo LR-F5300

Low Pressure Deformation Fluorosilicone Compound

Description:

Silfluo LR-F5300 series is a fluorosilicone elastomer compound formulated specifically for low compression set. Blended with reinforcing fillers and performance additives, it is engineered to maintain structural integrity and sealing resilience in fuel media operating continuously between -60°C and 225°C.

Chemical Name: Low Compression Set Fluorosilicone Rubber Compound (FVMQ HCR)

Synonyms: Fluorosilicone Compound, Low Set FVMQ Elastomer

Typical Technical Properties:

Test Item	Standard				
	Test Method	LR-5340	LR-5360	LR-5370	LR-5380
Appearance	Visual	Pale yellow, Smooth surface, No Impurities			
Specific Gravity (g/cm3)	ASTM D792	1.40	1.46	1.47	1.50
Hardness / shoreA	ASTM D2240	38	60	70	79
Tensile Strength (MPa)	ASTM D412	8.5	9.5	8.5	7.3
Elongation At Break (%)	ASTM D412	400	300	270	170
Tear Strength (kN/m)	ASTM D624-B	16	20	16	15
Compression Set (177°C*22h)	ASTM D395	10	9	13	13
Heat Resistance 225°C X 72h	Hardness change / shore A	+5	+5	+4	+4
	Tensile strength change %	-16	-17	-16	-18
	Elongation at break change %	-8	-10	-15	-23
Fuel C Volume change/% 23°C/72h	ASTM D471	23	23	21	21
Curing Condition	0.8 DBPH, Press cure: 170°C x 15min, Post cure: 200°C x 4h				

The above values are not intended for use in preparing specifications.

Heat resistance additives need to be added to meet the requirements of heat resistance.

Applications:

1. Static & Dynamic Sealing: Molded into O-rings, gaskets, and seals requiring strict shape recovery and low compression set under prolonged thermal and mechanical compression.
2. Fuel Systems: Utilized in aerospace and automotive fluid delivery systems exposed to non-polar solvents and fuels.

Processing Guidelines

1. Vulcanizing Agent: The recommended addition ratio is 0.6 to 0.8 phr of DBPH [2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane].
2. Milling: Mill for 4 to 6 passes on a two-roll mill to ensure homogeneity prior to sheeting and molding.

3. Curing Profile: Standard technical data is derived using 0.8 phr DBPH. Press cure at 170°C for 15 minutes, followed by a post-cure at 200°C for 4 hours. Actual production parameters must be calibrated based on part dimensions.
4. Thermal Stabilization: Additional heat stabilizers must be incorporated into the formulation if the final component needs to meet extended high-temperature aging specifications.

Package &Storage:
In 20kg reinforced cardboard box (contains two 10kg plastic bags).
Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight and ignition sources. The material exhibits cold-flow characteristics; avoid physical damage to the inner bags during transport and handling. The shelf life is 12 months from the date of manufacture when stored in original unopened containers (material can still be utilized if it passes quality inspection after the expiration date). Classified and transported as a non-hazardous substance.