SiSiB® FL9160 Fluoro Liquid Silicone Rubber (F-LSR)

INTRODUCTION

SiSiB® FL9160 is a two-part, platinum-catalyzed fluorosilicone rubber designed for liquid injection molding (LIM) applications. It is supplied as a soft fluorosilicone paste (Parts A and B), which cures to a 60 Shore A elastomer. The cured rubber is highly resistant to a wide range of fuels, oils, solvents, and aggressive chemicals. It remains flexible and functional under immersion conditions from -63°C to 175°C, and up to 225°C in dry heat environments, making it ideal for demanding sealing and insulating applications.

KEY FEATURES

- Excellent resistance to automotive fuels and lubricating oils
- Rapid cure with no cure by-products
- Outstanding high-temperature resistance
- Broad cure temperature range (130-200°C)
- Excellent solvent resistance

PHYSICAL PROPERTIES

Item	Value	Method
Appearance	Yellowish	
Viscosity Part A (Pa.s)	820	CTM 1094
(shear rate 10 s^{-1})		
Viscosity Part B (Pa.s)	770	CTM 1094
(shear rate 10 s^{-1})		
Curing As Molded 10 minutes at 120°C		
Specific Gravity / g/cm^3	1.42	ASTM D792
Hardness (Shore A)	59	ASTM D2240
Tensile Strength (MPa)	8	ASTM D412
Elongation at Break (%)	230	ASTM D412
Tear Strength (kN/m)	13	ASTM D624-B
Resilience (%)	/	ASTM D1054
Compression set (177°C x 22h, %)	20	ASTM D395
Post Curing 4 hours at 200°C		
Specific Gravity / g/cm^3	1.42	ASTM D792
Hardness (Shore A)	62	ASTM D2240
Tensile Strength (MPa)	7	ASTM D412
Elongation at Break (%)	180	ASTM D412
Tear Strength (kN/m)	13	ASTM D624-B

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Resilience (%)	43	ASTM D1054
Compression set (177°C x 22h, %)	7	ASTM D395
Fluid Resistance		
IRM903 (150°C x 168h, %)	2.0	ASTM D471
Fuel C (60°C x 168h, %)	21	ASTM D471
FAM B (60°C x 168h, %)	28	ASTM D471

These values are typical and are not intended for use as specifications.

APPLICATIONS

SiSiB® FL9160 liquid silicone rubber is commonly used in:

- Solvent & chemically resistant membranes and gaskets
- Precision-machined components with tight tolerance requirements
- Electrical/electronic connectors (for high-reliability applications)
- Extrusion coating onto wires, belts, fabrics, and other substrates
- High-performance gaskets and membranes for critical static/dynamic sealing applications

PROCESSING GUIDE

Mixing

SiSiB® FL9160 should be mixed in a 1:1 weight ratio (Part A: Part B). For production, metering and mixing equipment capable of preventing air entrapment is strongly recommended. Proper mixing and deaeration ensure optimal mechanical and dielectric performance.

Curing

Cure time is a function of mold temperature, part size, and material mass. At 150°C (302°F), the material cures within seconds. For best results, the cure cycle should be optimized according to the specific mold and component geometry.

Avoid contamination with substances that may inhibit the platinum-catalyzed cure, including: Amines, Sulfur-containing compounds, Tin salts and complexes, Certain organic peroxides.

Ensure all tooling and surfaces are clean and free of these contaminants before processing.

Clean-Up / Removal

Uncured material can be removed using solvents such as:

- Mineral spirits
- Naphtha
- Toluene or xylene
- Isopropyl alcohol (IPA)

Always follow appropriate safety procedures when using solvents.

PACKING

SiSiB® FL9160 is supplied in 20Kg plastic pail.

STORAGE

In the unopened original container SiSiB® FL9160 has a shelf life of 12 months in a dry and cool place. Avoid contact with nitrogen, sulfur, phosphorus and heavy metal-containing compounds to prevent product deterioration.

HANDLING

This document does not contain the product safety information required for safe use. Before handling, please refer to the product and safety data sheets, as well as container labels, for information on safe usage, physical hazards, and health risks. Safety Data Sheet is available on the website, from the distributor, or by contacting SiSiB customer service.

NOTE

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

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