



SLE5600

Silicone Liquid Elastomer

Product Description

SLE5600 is a two-component silicone liquid elastomer, which can be cured rapidly at elevated temperatures. This product is supplied with curing agent in matched kits, which are designed for use at a convenient 1:1 ratio by weight or volume. SLE5600 is beige in colour which facilitates pigmentation and has a viscosity of ~150,000 mPa·s.

Key Performance Properties

Product Features	Potential Benefits
Contains no solvents	Avoids hazards associated with solvents
	No solvent disposal procedure required
	Low manufacturing costs
Rapid cure time	Coating thickness from 0.03 - 0.75 mm
	Single pass coating
	Fast production rate
	Short cycle times
	High capacity
Pourable consistency	Can use existing coating and extrusion equipment
	Low equipment wear
	Ability to coat delicate fabric substrates
Beige colour	Easy to pigment
Wide range of molding temperatures: 150-260°C (300-500°F)	Processing flexibility
Good release	High productivity, low reject rate
Little or no flash on moulded parts	Reduction or elimination of finishing costs

Applications

SLE5600 is suggested for coating fiberglass and other industrial and structural fabrics and sleeving. Typical applications include belting, tape, insulation, electrical sleeving and protective blankets for use at elevated temperatures. SLE5600 is also appropriate for liquid injection molding of small rubber parts where moderate physical strength is adequate and the high strength of the standard Momentive performance materials Liquid Silicone Rubbers is not required.



Typical Properties Data

TYPICAL UNCURED PROPERTIES

		SLE5600A	SLE5600B	SLE5600 (1part A: 1part B)
Colour		Beige	Beige	Beige
Consistency		Pourable	Pourable	Pourable
Viscosity	mPa·s	150,000	150,000	150,000
Specific gravity	g/cm ³	1.28	1.25	1.27
Silicone Content	%	100	100	100
Shelf life	months	6	6	6
Work time @ 25°C	hrs	-	-	48

TYPICAL CURED PROPERTIES

Cured 1 h @ 150°C

		SLE5600
Hardness	Shore A	58
Tensile Strength	MPa	5,5
Elongation	%	220
Tear Strength	kN/m	16
Dielectric Strength, (0.45mm thick)	kV/mm	43
Dielectric constant @103 Hz		2.8
Dissipation factor @103 Hz		0.006
Volume resistivity	Ω·cm	1 x 10 ¹⁵
Useful Temperature Range	°C	-60 to 200

Specifications

Typical Product Data values should not be used as specifications. Assistance and recommendations are available by contacting Momentive performance materials Technical Service RTV1 and RTV2.

Instructions for use

SLE5600 contains no solvents; therefore, cure can be accomplished rapidly in a single step in a coating process or in an injection molding machine. Typical curing conditions for coating or extrusion are 1-2 minutes at 200°C. Standard equipment for coating or supported extrusion may be used with little or no modification. For liquid injection molding, SLE5600 may be handled with typical meter/mix systems for silicones and screw or plunger type machines, which have been designed or modified for the Liquid Injection Molding process.

Compatibility

SLE5600 silicone liquid elastomers will cure when applied to clean dry surfaces, which have been properly prepared. However, certain materials, such as butyl and chlorinated rubber, sulfur-containing materials, amines, and certain metal soap-cured RTV silicone rubber compounds, can cause cure inhibition. Cure inhibition is characterized by a gummy appearance of the silicone at the interface between it and the substrate. It is recommended that a sample patch test be performed with the SLE product to determine if a barrier coating or other inhibition-preventing measures are necessary before applying the liquid silicone elastomer.

Mixing

SLE5600A base compound and SLE5600B curing agent each must be thoroughly stirred before mixing together. Select a mixing container 4 - 5 times larger than the volume of silicone liquid elastomer to be used. Weigh out one part of the A component and one part of the B component. With clean tools, thoroughly mix the A and B components together, scraping the sides and bottom of the container carefully to produce a homogeneous mixture. When using power mixers, take care not to entrap large amounts of air or cause overheating of the mixture, resulting in short pot life.

Deaeration

Air entrapped during mixing should be removed to eliminate voids in the cured product. Expose the mixed materials to a vacuum of 10-20mbar. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete in about two minutes after frothing ceases. Automatic equipment designed to meter, mix, deaerate, and dispense two-component silicone rubber products will add convenience to continuous or large volume operations.

Curing

Thin coatings of SLE5600 [0.05 - 0.13 mm] applied to fabric substrates by dipping, spreading, knifing or extrusion can be cured sufficiently in one minute at 200°C to permit handling. Thick coating and/or substrates will decrease the rate of heat transfer and therefore will require a longer curing time or a higher curing temperature (230°C maximum). When used for liquid injection molding, SLE5600 can be cured in <1 minute in a heated mold. A typical cycle time is 20 seconds at 200°C. Depending upon part size and configuration, temperatures between 150°C and 260°C may be used. Suitable trials should be made for each part to determine optimum conditions.

Bonding

SLE5600 silicone liquid elastomer will frequently penetrate the weave of a fabric substrate and will thereby be held in place mechanically. Where the weave is very tight or the substrate is not permeable, a primer may be required to achieve a suitable bond. In such cases apply a uniform thin film [0.01 - 0.02 mm] of Momentive performance materials SS4155 or SS4120 primer to the clean, dry surface and allow the primer to dry for one hour. Finally, apply freshly catalyzed SLE5600 to the primed surface and cure as suggested. For more details on priming and adhesion please refer to Momentive performance materials data sheet on RTV primers. SS4155 and SS4120 silicone primers contain flammable solvents. When any solvent is used, proper safety precautions must be observed. All solvents must be considered toxic and must be used only in well ventilated areas. Exposure to high vapor concentration must be avoided. When flammable solvents are used, storage and use must be in areas away from heat, sparks, open flames, or other sources of ignition.

Storage & Warranty Period

SLE5600A base compound and SLE5600B curing agent will remain useful for six months from the date of shipment when stored in the original unopened containers at temperatures below 25°C.

Availability

SLE5600 A and SLE5600 B components are available in 45,4kg pails and 181,4kg drums.



PRINCIPAL LOCATIONS – Regional Information

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	• UA, Silanes, Resins, and Specialties	T 800.334.4674	F 304.746.1623
	• RTV Products-Elastomers	T 800.332.3390	F 304.746.1623
	• Sealants and Adhesives & Construction	T 877.943.7325	F 304.746.1654
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