

No Post Cure LIMS (Liquid Silicone Rubber Injection Molding System)

KE-2017 Series, KE-2019 Series

Post-cure-free LIMS with reduced low-molecular-weight siloxanes

More reduced
LMW siloxane

Oil bleeding

Low
compression
set

Short time
molding

Automated
molding

Flashless,
runnerless



Features

- Post cure using an oven is not required because low-molecular-weight siloxane is reduced.
- Lineup of oil bleed type and low compression set type.
- Improves mold fouling during molding and reduces the blur in shrinkage rate.

Applications

Waterproof seal of wire harness, gasket, packing and O-ring



General properties

Grade	Product name	Oil bleeding				Low compression set		
		KE-2017-20-A/B	KE-2017-30-A/B	KE-2017-40-A/B	KE-2017-50-A/B	KE-2019-40-A/B	KE-2019-50-A/B	KE-2019-60-A/B
Appearance		Translucent	Translucent	Translucent	Translucent	Transparent	Transparent	Transparent
Viscosity (A/B)	Pa·s	500/380	1,840/1,450	1,800/1,700	1,700/1,500	320/300	840/710	720/810
Curing speed at 130°C MDR	T10	31	41	36	32	23	27	38
	T90	83	77	76	75	52	69	65
Standard molding condition	Primary cure	150°C × 10 min	150°C × 10 min	150°C × 10 min	150°C × 10 min	150°C × 10 min	150°C × 10 min	150°C × 10 min
	Post cure	No need	No need	No need	No need	No need	No need	No need
Hardness Durometer A		21	33	42	52	42	52	62
Density at 23°C	g/cm ³	1.09	1.13	1.13	1.13	1.11	1.13	1.14
Linear shrinkage 150°C	%	2.6	2.5	2.5	2.5	2.4	2.3	2.3
Tensile strength	MPa	7.9	9.9	10.2	9.4	9.8	9.3	9.8
Elongation at break	%	860	740	650	490	655	538	470
Tear strength Angle	kN/m	10	20	33	38	35	44	47
Compression set 150°C × 70 h	%	14	16	18	18	12	16	35
Low-molecular-weight siloxane content ΣD ₃ -D ₁₀ ppm		350 >	350 >	350 >	350 >	350 >	350 >	350 >

(Not specified values)

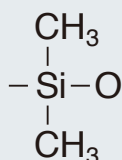
No Post Cure LIMS

KE-2017 Series, KE-2019 Series

Comparative Data of Low Molecular Siloxane Amounts by Solvent Extraction Method

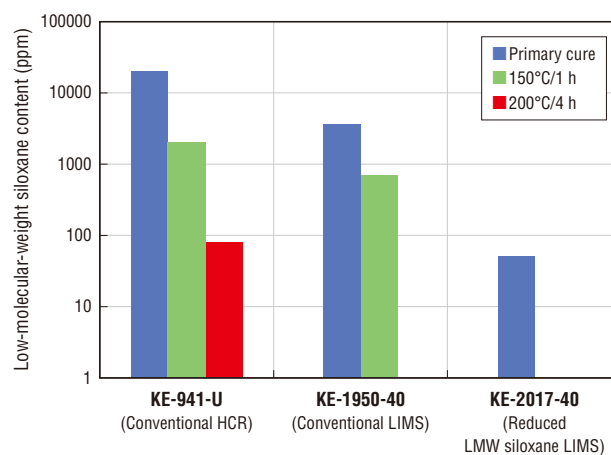
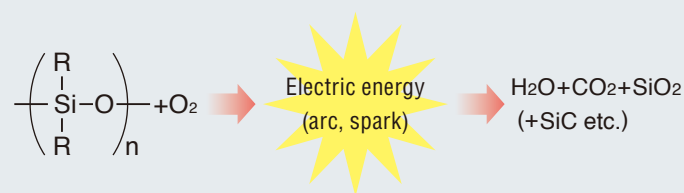
Reduces the use of low-molecular-weight siloxanes, reduces the risk of electrical contact failure, and reduces the production process.

Fig. 1 LMW siloxane



Silicone rubber products used for electrical and electronic equipment may cause electrical contact failure due to volatilization of LMW siloxanes (Fig. 1) remaining in the molded article.

Mechanism of Silica Generation by LMW Siloxanes



* This value is not a specification value or guaranteed value.

Handling precautions

1. Seal container tightly and store in a cool, dark place (25°C or below, out of direct sunlight) with good ventilation. Keep away from heat and flame because the primers used may be classified as flammable hazardous materials.
2. LIMS liquid silicone rubbers may not cure properly if they come in contact with certain substances, including amines, sulfur, organophosphorus compounds and organotin compounds. If there is a possibility of curing inhibition, the user should perform a test to determine whether the product will cure properly.

Some curing inhibitors

- Chloroprene and other synthetic rubbers
- Amine-cure epoxies
- Sulfur compounds
- PVC insulating tape
- Soft PVC
- Soldering flux that contains rosin

3. Mixing Liquid B with alkaline substances produces flammable hydrogen gas, so handle with caution.

Safety and hygiene

1. This product causes serious eye irritation and may cause skin irritation. When handling the product, be sure to avoid contact with the skin and mucous membranes by wearing protective glasses and protective gloves. In case of skin contact, immediately wipe off with dry cloth and then flush thoroughly with running water. In case of accidental eye contact, flush immediately with plenty of clean water for at least 15 minutes and then seek medical attention. Contact lens wearers must take special care. If the products get into the eye, the contact lens may become stuck to the eye.
2. In a confined space with poor ventilation, please wear a protective mask. It is recommended to provide local ventilation. If vapors are inhaled and victims feel uncomfortable, move immediately to an area with fresh air. When you put non-hardening substance into the discard, silica and other powder generate. So you should wear a protective mask.
3. Keep out of reach of children.
4. Please read the Safety Data Sheets (SDS) before use. SDS can be obtained from our Sales Department.

•The data and information presented in this catalog may not be relied upon to represent standard values. Shin-Etsu reserves the right to change such data and information, in whole or in part, in this catalog, including product performance standards and specifications without notice.

•Users are solely responsible for making preliminary tests to determine the suitability of products for their intended use. Statements concerning possible or suggested uses made herein may not be relied upon, or be construed, as a guaranty of no patent infringement.

•For detailed information regarding safety, please refer to the Safety Data Sheet (SDS).

•The silicone products described herein have been designed, manufactured and developed solely for general industrial use only; such silicone products are not designed for, intended for use as, or suitable for, medical, surgical or other particular purposes. Users have the sole responsibility and obligation to determine the

suitability of the silicone products described herein for any application, to make preliminary tests, and to confirm the safety of such products for their use.

•Users must never use the silicone products described herein for the purpose of implantation into the human body and/or injection into humans.

•Users are solely responsible for exporting or importing the silicone products described herein, and complying with all applicable laws, regulations, and rules relating to the use of such products. Shin-Etsu recommends checking each pertinent country's laws, regulations, and rules in advance, when exporting or importing, and before using the products.

•Please contact Shin-Etsu before reproducing any part of this catalog. Copyright belongs to Shin-Etsu Chemical Co., Ltd.

Shin-Etsu

Shin-Etsu Silicones of America, Inc.

Phone : +1-330-630-9860 Fax : +1-330-630-9855

<https://www.shinetsusilicones.com/shindex.html>

<https://www.shinetsusilicone-global.com/>

Shin-Etsu Chemical Co., Ltd.

Silicone Division Sales and Marketing Department III

Phone : +81-(0)3-3246-5151 Fax : +81-(0)3-3246-5362