Shin-Etsu Silicone

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		Oil bleeding				Low compression set		
Parameter \ Product name		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	s T10	31	41	36	32	23	27	38
	s 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)

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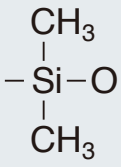
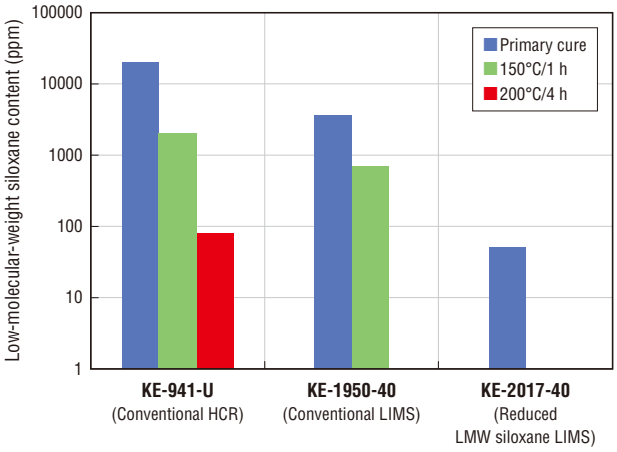
Comparative Data of Low Molecular Siloxane Amounts by Solvent Extraction Method

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

Fig. 1 LMW siloxane

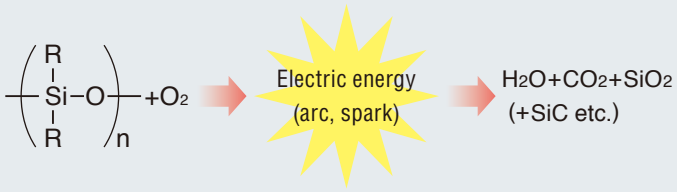


Silicone rubber products used for electrical and electronic equipment may cause electrical contact failure due to volatilization of LMW siloxanes (Fig. 1) remaining in the molded article.



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

Mechanism of Silica Generation by LMW Siloxanes



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
- Sulfur compounds
- Soft PVC
- Amine-cure epoxies
- PVC insulating tape
- 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 aconfined 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.

ShinEtsu

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

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■ Overseas sales office is here.
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This is an edited version of the product data released on Jul. 2021.