Safety Data Sheet (SDS)

Version: V2.0 Revision Date: 2025-10-24

Section 1 - Chemical Product and Company Identification

1.1 Product Identifier

Product Name: Tin Cured Silicone Rubber (Part A & Part B)

Synonyms: Condensation Silicone Rubber

Mix Ratio: A:B = 100:2 to 100:4 (by weight)

Product Code: RTV-31XX Series / RTV-32XX Series

1.2 Application

Identified Uses: This product is for industrial and professional use, primarily for making flexible molds used for casting materials such as resin, concrete, plaster, wax, and low-melt metals.

Uses Advised Against: This product is for industrial use only. It is not suitable for applications requiring long shelf life, food contact, or direct skin contact. Do not use for human injection.

1.3 Details of the Supplier

Company Name: Shenzhen MinghuiLink Silicone Co., Ltd.

Address: A22, 2nd Floor, Dongmeng Building, No. 690 Minzhi Avenue, Xinniu Community, Minzhi Sub-district, Longhua District, Shenzhen, Guangdong, China

Postal Code: 518131

Telephone: +86-15899753674

Email: info@siliconeab.com

1.4 Emergency Telephone Number

China: +86-0532-83889090 (National Registration Center for Chemicals)

Emergency Contact: +86-15899753674

EU: 112 (General Emergency Number)

Section 2 - Hazards Identification

2.1 Classification of the Substance or Mixture (GHS Classification)

This product is a two-component kit, and the hazard classifications for each component are different.

2.2 Part A (Base)

GHS Hazard Class: This component is not classified as hazardous according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

GHS Label Elements:

- **Hazard Pictograms:** N/A
- **Signal Word:** N/A
- **Hazard Statements:** N/A

2.3 Part B (Tin Catalyst)

GHS Hazard Class:

- Flammable Liquids - Category 3 (H226)
- Acute Toxicity (Oral) - Category 4 (H302)
- Skin Irritation - Category 2 (H315)
- Serious Eye Damage - Category 1 (H318)
- Skin Sensitization - Category 1 (H317)
- Specific Target Organ Toxicity (Single Exposure) - Category 3 (H335, Respiratory tract irritation)
- Reproductive Toxicity - Category 1B (H360D)
- Specific Target Organ Toxicity (Repeated Exposure) - Category 1 (H372)
- Hazardous to the Aquatic Environment, Long-Term Hazard - Category 1 (H410)

GHS Label Elements, Including Precautionary Statements:

Pictograms:

Signal Word: Danger

Hazard Statements:

- H226: Flammable liquid and vapor.
- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation.
- H360D: May damage the unborn child.
- H370: Causes damage to organs (thymus).

- H372: Causes damage to organs (immune system) through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

- **Prevention:**
  - P201: Obtain special instructions before use.
  - P210: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
  - P260: Do not breathe fume/vapors.
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.
- **Response:**
  - P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  - P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
  - P308+P313: IF exposed or concerned: Get medical advice/attention.
  - P391: Collect spillage.
- **Disposal:**
  - P501: Dispose of contents/container to an approved waste disposal plant.

2.4 Cured Silicone Rubber (Part A + Part B Mixed and Cured)

Not classified as hazardous. The cured product is a chemically stable, inert elastomer.

2.5 Hazards Not Otherwise Classified (HNOC)

By-products such as alcohols are released during curing, which may be irritating. Spilled liquid material poses a serious slip hazard.

Section 3-Composition/Information on Ingredients

3.1 Part A (Base) Composition Information

Chemical Composition	CAS No.	EC#	Weight (%)
Siloxanes and silicones, dimethyl, hydroxy-terminated	63148-60-7	613-154-4	35-45
Silica	7631-86-9	231-545-4	30-40
Dimethyl silicone oil 201	63148-62-9	613-156-5	20-30

3.2 Part B (Tin Catalyst) Composition Information

Chemical Composition	CAS No.	EC#	Weight (%)
Silicic acid	11099-06-2	234-324-0	50-60
Tetraethyl orthosilicate	78-10-4	201-083-8	15-20
Dimethyl silicone oil 201	63148-62-9	613-156-5	10-15
Dimethyltin dineodecanoate	68928-76-7	273-028-6	5-10

Section 4 -First Aid Measures

4.1 Description of First-Aid Measures

Inhalation: Move victim to fresh air. If breathing is difficult, give oxygen. If symptoms persist, seek medical attention.

Skin Contact: Immediately remove contaminated clothing. Wash affected area thoroughly with plenty of soap and water. If irritation or rash develops, seek medical attention.

Eye Contact: Immediately flush with plenty of running water for at least 15 minutes. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water and seek immediate medical help.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Acute Effects:

- **Part A:** Under normal conditions of use, no significant acute health effects are expected.
- **Part B:** Harmful if swallowed. Causes serious eye damage and skin irritation, and may cause an allergic skin reaction and respiratory irritation.

Delayed Effects: Prolonged or repeated exposure to Part B may cause damage to the immune system and the unborn child.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically. For patients exposed to organotin compounds, be alert to potential systemic toxic effects, especially on the immune and reproductive systems.

Section 5 -Fire Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Water spray, alcohol-resistant foam, carbon dioxide (CO_2), dry chemical.

Unsuitable Extinguishing Media: High-pressure water stream.

5.2 Special Hazards Arising from the Substance or Mixture

Combustion will produce carbon monoxide, carbon dioxide, and silicon oxides (silica). When heated to temperatures above 150°C (300°F), may decompose to produce formaldehyde vapor.

Specific Hazards: Part B is a flammable liquid.

5.3 Advice for Firefighters

Protective Equipment: Firefighters must wear a positive-pressure self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing.

Fire-Fighting Procedures: Use water spray to cool unopened containers. Prevent fire-fighting water from entering drains or watercourses.

Section 6-Accidental Release Measures

6.1 Personal precautions:

For Non-Emergency Personnel: Evacuate the spill area and ensure adequate ventilation. Avoid contact with spilled material. Do not walk through spilled material, as it creates an extremely slippery surface with a serious risk of falling. Eliminate all ignition sources.

For Emergency Responders: Wear appropriate Personal Protective Equipment (PPE) as detailed in Section 8.

6.2 Environmental Precautions

Prevent spillage from entering sewers, surface water, or groundwater systems. If a large spill occurs, notify local authorities.

6.3 Methods and Material for Containment and Cleaning Up

Containment & Absorption: Use inert, non-combustible absorbent material (e.g., sand, earth) to control and absorb the spill.

Collection & Cleaning: Collect the absorbed material into a properly labeled, sealed container for disposal. Clean the contaminated area thoroughly with detergent and water.

Section 7 -Handling and Storage

7.1 Precautions for Safe Handling

Handling: Handle in a well-ventilated area. Wear personal protective equipment as described in Section 8 to avoid contact with skin and eyes.

Hygiene Measures: Maintain good industrial hygiene practices. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after handling.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a cool, dry, well-ventilated place in the original, tightly sealed container.

Conditions to Avoid: Keep away from direct sunlight, heat sources, sparks, and open flames.

Incompatible Materials: Keep away from strong oxidizing agents, water, acids, and bases.

Section 8-Exposure Controls/Personal Protection

8.1 Part A Control Parameters

Chemical Composition	CAS No.	ACGIH	NIOSH	OSHA
Siloxanes and silicones, dimethyl hydroxy-terminated	63148-60-7	N/A	N/A	N/A
Silica	7631-86-9	N/A	N/A	N/A
Dimethyl silicone oil 201	63148-62-9	N/A	N/A	N/A

8.2 Part B Control Parameters

Chemical Composition	CAS No.	ACGIH	NIOSH	OSHA
Silicic acid	11099-06-2	N/A	N/A	N/A
Tetraethyl orthosilicate	78-10-4	TLV-TWA 10ppm	REL-TWA 10ppm	PEL-TWA 10ppm PEL-TWA
Dimethyl silicone oil 201	63148-62-9	N/A	N/A	N/A
Dimethyltin dineodecanoate	68928-76-7	TLV-TWA 0.1mg/m³	REL-TWA 0.1mg/m^3	PEL-TWA 0.1mg/m^3

8.3 Exposure Controls

Engineering Controls: Use a local exhaust ventilation system, especially when mixing or heating materials.

Personal Protective Equipment (PPE):

- **Eye/Face Protection:** Wear chemical splash goggles with side shields.
- **Skin Protection:** Wear chemically resistant, impervious gloves (e.g., nitrile, neoprene, or PVC gloves). Wear long-sleeved work clothing.
- **Respiratory Protection:** Generally not required under normal conditions with good ventilation. If operations generate vapor or mist, or when performing operations that may produce respirable dust (such as sanding cured rubber), a NIOSH-approved respirator with an organic vapor cartridge and a particulate pre-filter (P95 or P100) should be worn.

Section 9 -Physical and Chemical Properties

Property	Part A (Base Rubber)	Part B (Tin Catalyst)
Appearance & State	Viscous liquid, white or translucent	Low viscous liquid, clear to yellowish
Odor	Odorless	Slight characteristic odor
Flash Point	>100.0℃ (Closed Cup)	>44.0℃ (Closed Cup)
Viscosity (@25℃)	10,000 - 40,000 mPa·s	< 300 mPa·s
Specific Gravity	Approx. 1.05–1.40g/cm^3	Approx. 0.97–1.05g/cm^3
Solubility	Insoluble in water	Insoluble in water

Section 10-Stability and Reactivity

10.1 Reactivity

Part A: Not classified as a reactivity hazard under normal conditions.

Part B: No data available.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

Part A: Hazardous polymerization will not occur under normal use and storage conditions.

Part B: No data available.

10.4 Conditions to Avoid

Heat sources, flames, and sparks. Avoid contact with moisture and incompatible substances.

10.5 Incompatible Materials

Strong oxidizing agents, acids, and bases.

10.6 Hazardous Decomposition Products

No hazardous decomposition products are expected under normal conditions of use. Under fire conditions, may produce formaldehyde, carbon monoxide, carbon dioxide, and silicon oxides.

Section 11-Toxicological Information

11.1 Part A Acute Toxicity

Chemical Composition	CAS No.	LC50/LD50
Siloxanes and silicones, dimethyl hydroxy-terminated	63148-60-7	LD50 Rat (oral): > 5000 mg/kg
Silica	7631-86-9	LD50 Rat (oral): > 5000 mg/kg
Dimethyl silicone oil 201	63148-62-9	LD50 Rat (oral): > 5000 mg/kg

11.2 Part B Acute Toxicity

Chemical Composition	CAS No.	LC50/LD50
Silicic acid	11099-06-2	LD50 Rat (oral): > 2000 mg/kg
Tetraethyl orthosilicate	78-10-4	LD50 Rat (oral): > 2000 mg/kg
Dimethyl silicone oil 201	63148-62-9	LD50 Rat (oral): > 5000 mg/kg
Dimethyltin dineodecanoate	68928-76-7	LD50 Rat (oral): > 894 mg/kg

11.3 Skin Corrosion/Irritation

Part A: No data available.

Part B: Prolonged contact may cause skin irritation (GHS Category 2).

11.4 Serious Eye Damage/Irritation

Part A: No data available.

Part B: Causes serious eye damage (GHS Category 1).

11.5 Respiratory or Skin Sensitization

Part A: No data available.

Part B: May cause an allergic skin reaction (GHS Category 1).

11.6 Reproductive Toxicity

Part A: No data available.

Part B: May cause harm to the unborn child (GHS Category 1B).

11.7 Specific Target Organ Toxicity (Single and Repeated Exposure)

Part A: No data available.

Part B: May cause respiratory irritation (single exposure); may cause damage to the immune system through prolonged or repeated exposure (repeated exposure).

Section 12-Ecological Information

12.1 Toxicity

Part A: Not expected to be acutely toxic to aquatic organisms. However, direct release to the environment should be avoided.

Part B: Very toxic to aquatic life with long-lasting effects.

Cured Silicone Rubber: Considered inert and not expected to be ecotoxic.

12.2 Persistence and Degradability

Part A: The silicone polymer components in the product are not readily biodegradable but are persistent in the environment.

Part B: No data available.

12.3 Bioaccumulative Potential

Part A: Certain low molecular weight cyclic siloxane impurities may be bioaccumulative.

Part B: Low bioaccumulation potential (Bioconcentration Factor (BCF): 3, Octanol/Water Partition Coefficient (Kow): 0.04).

12.4 Mobility in Soil

Part A: The product is insoluble in water and is expected to have low mobility in soil.

Part B: Very high mobility in soil (Adsorption Coefficient (Koc value): 1).

Section 13-Disposal Considerations

Uncured Product: Do not discharge into drains or the environment. Should be disposed of as hazardous chemical waste in accordance with all local, state, and federal regulations.

Cured Product: Fully cured silicone rubber is generally considered non-hazardous solid waste and may be disposed of in a landfill according to local regulations.

Contaminated Packaging: Empty containers contaminated with the product should be treated with the same requirements as the product itself.

Section 14-Transport Information

UN Number: Not applicable.

UN Proper Shipping Name: Not applicable.

Transport Hazard Class(es): Not applicable.

Packing Group: Not applicable.

Environmental Hazards: Not a marine pollutant. (Note: This conclusion applies to the entire kit. If Part B of the tin-curing system is shipped separately in large quantities, it should be classified as an environmental hazard).

General Information: This product as a kit is generally not regulated for non-bulk transport. However, when Part B is shipped separately in large packaging, it may be classified as UN 1993, Flammable liquid, n.o.s. (contains Ethyl Silicate), 3, PG III, and may be considered a marine pollutant due to the organotin compound content. The shipper must verify and comply with all applicable transport regulations.

Section 15-Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Composition	CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ ELINCS/ NLP
Siloxanes and silicones, dimethyl hydroxy-terminated	63148-60-7	Listed	Listed	Listed DSL	Listed
Silica	7631-86-9	Listed	Listed	Listed DSL	Listed
Dimethyl silicone oil 201	63148-62-9	Listed	Listed	Listed DSL	Listed
Silicic acid	11099-06-2	Listed	Listed	Listed DSL	Listed
Tetraethyl orthosilicate	78-10-4	Listed	Listed	Listed DSL	Listed
Dimethyltin dineodecanoate	68928-76-7	Listed	Listed	Listed DSL	Listed

Section 16 - Other Information

Date of Preparation or Last Revision: 2025-10-24

Explanation of Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service

EC#: European Chemical Inventory Number

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

HNOC: Hazard Not Otherwise Classified

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods Code

NIOSH: National Institute for Occupational Safety and Health

OEL: Occupational Exposure Limit

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PG: Packing Group

PPE: Personal Protective Equipment

PVC: Polyvinyl Chloride

REL: Recommended Exposure Limit

RTV: Room Temperature Vulcanizing

SCBA: Self-Contained Breathing Apparatus

SDS: Safety Data Sheet

TLV: Threshold Limit Value

TSCA: Toxic Substances Control Act

TWA: Time-Weighted Average

UN: United Nations

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