

**1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

Guangzhou Baiyun Chemical Industry Co., Ltd.
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EMERGENCY PHONE: (8620)37312999
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Generic Description: Silicone compound
Physical Form: Viscous liquid
Color: black
Odor: Amine-like odor
NFPA Profile: Health 1 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS**INGREDIENT:**

<u>CAS NO.</u>	<u>% WT</u>	<u>COMPONENT NAME</u>
—	20.0-60.0	orthosilicate
—	20.0-60.0	alkoxysilane
77-58-7	1.0-5.0	Dibutyltin dilaurate

The above components are hazardous as defined in 29 CFR 1910.1200.

3. EFFECTS OF OVEREXPOSURE**Acute Effects**

Eye: May cause irreversible damage and burns to the eyes.

Skin: Corrosive. Burns skin upon prolonged contact.

Inhalation: Severely irritating to the respiratory tract. Overexposure by inhalation may cause drowsiness, dizziness, confusion or loss of coordination.

Oral: Corrosive. May cause severe and permanent damage to the mouth, throat and stomach.
Overexposure by ingestion may cause nervous system depression which may be characterized by drowsiness, dizziness, confusion, loss of coordination, unconsciousness, and with large quantities even death.

Prolonged/Repeated Exposure Effects

Skin: Overexposure by skin absorption may injure the following organ(s): Kidneys.

Inhalation: Overexposure by inhalation may injure the following organ(s): Kidneys.Nervous system.Lungs

Oral: Overexposure by ingestion may injure the following organ(s): Liver. Kidneys.

**Signs and Symptoms of Overexposure**

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

4. FIRST AID MEASURES

Eye: Immediately flush with water for 15 minutes. Get medical attention.
Skin: Remove from skin and immediately flush with water for 15 minutes. Get medical attention.
Inhalation: Remove to fresh air. Get immediate medical attention.
Oral: Get immediate medical attention. Do not include vomiting.
Comments: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: Not determined.
Autoignition: Not determined.
Flammability Limits in Air: Not determined.
Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.
Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards: Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicone dioxide. Nitrogen oxides. Metal oxides. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate



containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Clean area as appropriate since some silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain state requirements.

Note: See section 8 for Personal Protective Equipment for Spills. Call Guangzhou Baiyun Chemical Industry Co., Ltd., (8620)37312999, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves methyl alcohol, ethyl alcohol and n-butyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure guidelines or use air-supplied or self-contained breathing apparatus. Avoid eye contact. Avoid breathing vapor. Keep container closed. Do not take internally.

Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed away from heat, sparks, and flame. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
—	orthosilicate	See ethyl alcohol comments.
—	alkoxysilane	See methyl alcohol comments.
77-58-7	Dibutyltin dilaurate	Observe organic tin compounds limits. OSHA PEL and ACGIH TLV-skin: TWA 0.1mg/m ³ ; ACGIH STEL 0.2 mg/m ³ See n-butyl alcohol comments.

Methyl alcohol, ethyl alcohol and n-butyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL and ACGIH.

Engineering Controls

Local Ventilation: Recommended.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling



- Eyes:** Use chemical worker's goggles.
- Skin:** Washing at mealtime and end of shift. Skin contact must be avoided by using impermeous protective clothing(gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.
- Suitable Gloves:** Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your gloves and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.
- Inhalation:** Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can assist in judging the adequacy of existing engineering controls.
- Suitable Respirator:** General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respiratory regulations(29 CFR1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

- Eyes:** Use full face respirator.
- Skin:** Washing at mealtime and end of shift is adequate. Skin contact must be avoided by using impermeous protective clothing(gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.
- Inhalation/Suitable** Respiratory protection recommended. Follow OSHA Respirator Regulations(29CFR1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Respirator:**
- Precautionary Measures:** Avoid eye contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.
- Comments:** Product evolves methanol, ethanol and butanol when exposed to water or humid air. Provide ventilation during use to control exposure guidelines or use air-supplied or self-contained breathing apparatus.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry(www.SEHSC.com) or contact Guangzhou Baiyun Chemical Industry Co., Ltd.

9. PHYSICAL AND CHEMICAL PROPERTIES



Physical Form: Viscous Liquid
Color: BLACK
Odor: Amine-like odor
Specific Gravity @ 25°C: 1.01
Viscosity: Not determined.
Freezing/Melting Point: Not determined.
Boiling Point: Not determined.
Vapor Pressure @ 25°C: Not determined.
Vapor Density: Not determined.
Solubility in Water: Not determined.
pH: Not determined.
Volatile Content: Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact Guangzhou Baiyun Chemical Industry Co., Ltd. before writing specifications.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous Polymerization: Hazardous polymerization will not occur.
Conditions to Avoid: None.
Materials to Avoid: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

Teratogens

<u>CAS Number</u>	<u>% WT</u>	<u>Component Name</u>	
77-58-7	1.0-5.0	Dibutyltin dilaurate	Evidence of teratogenicity(birth defects) in laboratory animals

Reproductive Effects

<u>CAS Number</u>	<u>% WT</u>	<u>Component Name</u>	
77-58-7	1.0-5.0	Dibutyltin dilaurate	Evidence of reproductive effects in laboratory animals.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants



Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? Yes
State or local laws may impose additional regulatory requirements regarding disposal.

Call Guangzhou Baiyun Chemical Industry Co., Ltd., (8620)37312999, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
UN/NA Number: UN2924
Packing Group; III
Hazard Label(s): Flammable Liquid, Corrosive

Ocean Shipment (IMDG)

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
UN/NA Number: UN2924
Packing Group; III
Hazard Label(s): Flammable Liquid, Corrosive

Marine Pollutant: Dibutyltin dilaurate

Air Shipment (IATA)

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
UN/NA Number: UN2924
Packing Group; III
Hazard Label(s): Flammable Liquid, Corrosive

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15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings



Section 302 Extremely Hazardous Substances:

None.

Section 304 CERCLA Hazardous Substances:

None.

Section 311/312 Hazard Class:

Acute: Yes

Chronic: Yes

Fire: Yes

Pressure: No

Reactive: No

Section 313 Toxic Chemicals:

None present or none present in regulated quantities.

16. OTHER INFORMATION

Prepared by: Guangzhou Baiyun Chemical Industry Co., Ltd.

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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