

Safety data sheet

Product name: Sulfurized Isobutylene (T321C)

SDS Number:D-SDS-05



Safety data sheet

GUANGDA Safety data sheet

Date / Revised: 21.05.2016/08.04.2024

Product: **Sulfurized Isobutylene (one-step method)**

Version: 2.0

(D-SDS-05)

Date of print: 12.05.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:

Sulfurized Isobutylene (T321C)

Use: Additive(s)

Manufacturer/supplier:

Shenyang Guangda Chemical Co., Ltd.

No. 4A, Xihe Liu North Street, Shenyang Economic & Technological Development Zone

Shenyang 110141, Liaoning, P.R CHINA

Telephone: +86 24 25798338

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Emergency information:

Emergency Advice Number: +86 24 25798341

2. Hazard(s) Statement

Classification of the substance and mixture:

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified (HNOC):

Not applicable.

Label elements:

Hazard pictograms: None

Signal word: None

Hazard Statement: None

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The product was tested and identified by Shanghai Chemical Industry Research Institute Testing Co., Ltd. (a national - designated hazardous substance testing unit) in 2020. The conclusion is: Hazard identification: None.

Precautionary statement

Avoid inhalation of volatile gases;
wear chemical-resistant gloves;
First Aid Measures after skin contact:
Immediately blot with absorbent paper, then wash thoroughly with soap and water;
Remove and wash contaminated clothing before reuse.

Hazard Classification Results

This product was tested and classified in the 2020 annual inspection by Shanghai Chemical Industry Research Institute Testing Co., Ltd. The results are as follows:

Explosive Hazard	:	The substance is not classified as an explosive.
Flammable Hazard	:	A closed-cup flash point test conducted at 70°C showed no flash ignition, confirming the substance does not fall under Class 3 Flammable Liquids
Oxidizing Hazard	:	The substance is not categorized as an oxidizer or organic peroxide
Toxic/Infectious Hazard	:	The substance is excluded from toxic and infectious substances
Radioactive Hazard	:	The substance is not classified as radioactive material
Corrosive Hazard	:	The substance is not classified as corrosive
Other Hazards	:	No additional hazards identified

3. Composition/information on ingredients

Chemical natures:

Name	CAS No.	Content (%)	GHS Classification
Sulfurized Isobutylene	68511-50-2	100	Not applicable

Compound:

Not applicable

4. First-Aid Measures

Description of first aid measures

General advice	:	Remove contaminated clothing
If inhaled	:	Keep patient calm, remove to fresh air.
On skin contact	:	Wipe with absorbent material and wash thoroughly with soap and water
On contact with eyes	:	Wash affected eyes under running water with eyelids held open. Seek medical attention if irritation persists.
On ingestion	:	Do induce vomiting and seek medical attention.

Symptoms/Health Effects

Inhalation	:	Slight odor irritation possible.
Eye Contact	:	Mild irritation may occur.
Skin Contact	:	No significant adverse effects reported.

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Ingestion : No significant adverse effects reported

Seek immediate medical attention:
Determine based on actual conditions

5. Fire-Fighting Measures

Suitable extinguishing media:
carbon dioxide, foam, dry powder, sand.

Unsuitable extinguishing media:
If a large quantity of this product is on fire, DO NOT use water to extinguish.

Specific hazards arising from the chemical:
Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous thermal decomposition products:
No specific data.

Special protective actions for fire-fighters:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters:
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal precautions:
PPE should wear protective gloves and there is no requirement for other protective equipment.
After the product leakage is detected, inform the pre-designated operators, quickly set up the prepared collection and storage facilities, collect the leaked product as soon as possible, and then remove the small amount of residual product.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:
Collect spills using vacuum equipment or pumps (DP, CP or MDP).
Absorb residual material with sawdust and dispose as hazardous waste.

Preventive Measures Against Secondary Hazards:
If the leaked product enters the stormwater drainage network, immediately shut down the facility's stormwater discharge outlet, physically remove the product from the stormwater pipeline using non-sparking tools or divert the contaminated stormwater to the facility's emergency containment basin for phase separation.

7. Handling and Storage

Precaution for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an

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approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Storage Conditions:

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Protective measures Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container. Precautions for safe handling Headspace of storage vessel may contain small amounts (ppm levels) of hydrogen sulfide.

Storage Container Specifications:

200L Galvanized Steel Drum;
200L Baked Paint Steel Drum
1 m³ IBC Tank;
20 m³ Tank or larger stainless-steel containers.
Prohibit the use of containers with moisture, rust, or foreign contaminants

8. Exposure controls and personal protection

Allowable concentration

No limited

Engineering Controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the

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	end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields. Recommended: splash goggles
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

9. Physical and Chemical Properties

Appearance	: Light Yellow transparent liquid
Odor	: Sulfurous odor (≤ 10 ppm)
pH value	: Neutral
Melting point/Freezing point	: $-20^{\circ}\text{C} \sim -15^{\circ}\text{C}$
Boiling point	: $> 200^{\circ}\text{C}$
Flash Point (Closed up) :	: No less than 80°C
Flammability Limits	
Upper limits	: No data available
Lower limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Density (20°C)	: $1000 - 1100 \text{ kg/m}^3$
Solubility (water)	: Insoluble in water; soluble in some organic solvents."
KOW	: No data available
Natural Temperature	: No data available
Decomposition Temperature	: 150°C

10. Stability and Reactivity

Reactivity:

No specific test data related to reactivity available for this product or its ingredients.

Chemical stability:

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The product is stable.

Possibility of hazardous reactions:

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid:

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Avoid temperatures above 100°C.

Incompatible substances:

Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

Instability Remarks:

Avoid heat, sparks, flame, and build-up of static electricity.

11. Toxicological Information

General Information

Acute toxicity	: Not observed
Skin irritation/corrosion	: Not observed
Eye irritation/damage	: May cause mild irritation
Respiratory or skin sensitization	: Not observed
Germ cell mutagenicity	: Not observed
Carcinogenicity	: Not observed
Reproductive toxicity	: Not observed
STOT - single exposure	: Not observed
STOT - repeated exposure	: Not observed

Routes of exposure

Inhalation	: Not observed
Eye contact	: May cause mild irritation
Skin contact	: No adverse reactions observed
Ingestion	: No adverse reactions observed

12. Ecological Information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
SULFURIZED ISOBUTYLENE 68511-50-2	-	-	-	-
Other impurities N/A	-	-	-	-

Mobility in soil

When released into the environment, adsorption to sediment and soil will be the predominant behavior.

Persistence/degradability

This product is expected to be inherently biodegradable.

Bioaccumulation potential

Bioaccumulation is unlikely due to the very low water solubility of this product, therefore bioavailability

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to aquatic organisms is minimum.

Other adverse effects

No information available.

13. Disposal Considerations

Disposal methods The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport Information

Classification:

Based on the 2020 test and evaluation by Shanghai Chemical Industry Research Institute Testing Co., Ltd. (a national designated hazardous materials testing authority), this product:

Sea Transport: Classified as non-restricted cargo under IMO IMDG Code.

Road Transport: Not subject to regulatory restrictions under JT/T617-2018 (China Road Transport Rules for Dangerous Goods).

IATA:

UN No.: Not Dangerous

Goods Class: Not Dangerous

Goods PSN: Not Dangerous Goods

PG: Not Dangerous Goods

Precautions:

Avoid contact with acids, oxidizers, and seawater during transportation to prevent packaging corrosion, which may lead to product leakage.

15. Regulatory Information

This Safety Data Sheet (SDS) is prepared in accordance with “GB/T16483-2008 Guidelines for the Content and Order of Items in Chemical Safety Technical Instructions”, and “Globally Harmonized System of Classification and Labelling of Chemicals (GHS)”.

This Safety Data Sheet (SDS) is developed under the framework of “GB 13690-2009 General Rules for Classification and Hazard Communication of Chemicals”

The disposal of waste containing this product must strictly comply with local regulations.

International Inventories

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TSCA

Does not comply

Name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Sulfurized Isobutylene	68511-50-2	Present	Active

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AIIC	Does not comply
NZIoC	Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing Chemicals Inventory

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

Federal Regulations

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories:

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. CWA (Clean Water Act) This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA:

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations :

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information :

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EPA Pesticide Registration Number Not applicable

16. Other Information

This product undergoes **annual hazard classification testing** by [*Shanghai Research Institute of Chemical Industry Testing Co., Ltd. (SRICI)*], an accredited third-party laboratory.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. Our company shall not assume any legal responsibility in this Safety Data Sheet (SDS).

This Safety Data Sheet (SDS) was compiled on May 21st, 2016, and revised on April 8, 2024.