



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

**Product name:** Isobutyl Nitrite  
**Product code:** I0528  
**Company:** TCI (Shanghai) DEVELOPMENT CO., LTD.  
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**Revision number:** 1

## 2. HAZARDS IDENTIFICATION

### Classification of the GHS

#### PHYSICAL HAZARDS

Flammable liquids Category 2

#### HEALTH HAZARDS

Acute toxicity (Oral) Category 4

Acute toxicity (Inhalation) Category 4

Germ cell mutagenicity Category 2

Carcinogenicity Category 1B

Specific target organ toxicity blood, cardiovascular system, heart

- Single exposure [Category 2]

#### ENVIRONMENTAL HAZARDS

Not classified

#### GHS label elements

##### Pictograms or hazard symbols



##### Signal word

Danger

##### Hazard statement

Highly flammable liquid and vapour  
 Harmful by inhalation and if swallowed  
 Suspected of causing genetic defects  
 May cause cancer  
 May cause damage to organs : blood cardiovascular system  
 heart

##### Precautionary statements

###### [Prevention]

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Keep container tightly closed.  
 Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against ignition by the static discharge and the spark.  
 Do not breathe.  
 Use only outdoors or in a well-ventilated area.  
 Do not eat, drink or smoke when using this product.  
 Wash hands thoroughly after handling.  
 Wear protective gloves/eye protection/face protection.

## 2. HAZARDS IDENTIFICATION

### [Response]

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

### [Storage]

Store in a well-ventilated place. Keep cool.

Store locked up.

### [Disposal]

Dispose of contents/container through a waste management company authorized by the local government

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Substance/mixture:</b>	Substance
<b>Component(s):</b>	Isobutyl Nitrite
<b>Percent:</b>	>95.0%(GC)
<b>CAS Number:</b>	542-56-3
<b>Synonyms:</b>	2-Methylpropyl Nitrite
<b>Chemical Formula:</b>	C <sub>4</sub> H <sub>9</sub> NO <sub>2</sub>

## 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
<b>Skin contact:</b>	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
<b>Ingestion:</b>	Get medical advice/attention. Rinse mouth.
<b>Symptoms/effects:</b>	sore throat , headache, dizziness, cyanosis, nausea, confuse , convulsions, unconsciousness
<b>Protection of first-aiders:</b>	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.
<b>Notes to physician:</b>	Depending on the degree of exposure, periodic medical examination is indicated.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Dry chemical, foam, carbon dioxide.
<b>Extinguishing media not to be used:</b>	Water (It may scatter and spread fire.)
<b>Specific hazards:</b>	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
<b>Specific methods:</b>	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
<b>Special protective equipment for firefighters:</b>	When extinguishing fire, be sure to wear personal protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
<b>Environmental precautions:</b>	Prevent product from entering drains.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Methods and materials for containment and cleaning up:</b>	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
<b>Prevention of secondary hazards:</b>	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

## 7. HANDLING AND STORAGE

### Handling

<b>Technical measures:</b>	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.
<b>Advice on safe handling:</b>	Avoid all contact!

### Storage

<b>Storage conditions:</b>	Keep container tightly closed. Store in an explosion-proof refrigerator. Store under inert gas. Protect from moisture. Store locked up. Store away from incompatible materials such as oxidizing agents.
<b>Packaging material:</b>	Law is followed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls:</b>	Install a closed system or local exhaust. Also install safety shower and eye bath.
<b>Exposure limits:</b>	
<b>ACGIH TLV(CL):</b>	1 ppm (I,V)
<b>Personal protective equipment</b>	
<b>Respiratory protection:</b>	Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
<b>Hand protection:</b>	Impervious gloves.
<b>Eye protection:</b>	Safety goggles. A face-shield, if the situation requires.
<b>Skin and body protection:</b>	Impervious protective clothing. Protective boots, if the situation requires.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state (20°C):</b>	Liquid
<b>Form:</b>	clear
<b>Color:</b>	Pale yellow - Yellow
<b>Odor:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point/freezing point:</b>	No data available
<b>Boiling Point/Range:</b>	67 °C
<b>Flash Point:</b>	No data available
<b>Explosive limits</b>	
<b>Lower:</b>	1.2%
<b>Upper:</b>	26.9%
<b>Vapor Pressure:</b>	1.3kPa/20°C
<b>Vapor Density:</b>	3.56
<b>Density:</b>	0.87
<b>Solubility:</b>	Miscible with : Alcohol Very slightly soluble in: Water (gradually decompose)

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under proper conditions.
<b>Reactivity:</b>	No special reactivity has been reported.
<b>Conditions to avoid:</b>	Heat-sensitive, Light-sensitive, Moisture-sensitive
<b>Incompatible materials:</b>	oxidizing agents, acids
<b>Hazardous Decomposition Products:</b>	Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	ihl-rat LC50:777 ppm/4H ipr-mus LD50:184 mg/kg orl-rat LD50:410 mg/kg
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	No data available
<b>Germ cell mutagenicity:</b>	mmo-sat 1 mg/plate (+S9) mmo-sat 333 ug/plate (-S9)
<b>Carcinogenicity:</b>	ihl-mus RCLo:150 ppm/6H/2Y-I ihl-rat TCLo:150 ppm/6H/2Y-I IARC = Group 3 (Not classifiable as carcinogenic to humans). NTP = No data available
<b>Reproductive toxicity:</b>	No data available
<b>RTECS Number:</b>	RA0805000

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	
<b>Fish:</b>	No data available
<b>Crustacea:</b>	No data available
<b>Algae:</b>	No data available
<b>Persistence / degradability:</b>	No data available
<b>Bioaccumulative potential(BCF):</b>	No data available
<b>Mobility in soil</b>	
<b>log Pow:</b>	No data available
<b>Soil adsorption (Koc):</b>	No data available
<b>Henry's Law constant(PaM<sup>3</sup>/mol):</b>	No data available

## 13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

## 14. TRANSPORT INFORMATION

<b>Hazards Class:</b>	3: Flammable liquid.
<b>UN-No:</b>	2351
<b>Proper shipping name:</b>	Butyl nitrites
<b>Packing group:</b>	II

## 15. REGULATORY INFORMATION

**Safe management ordinance of dangerous chemical product (State Council announces on January 26, 2002):** Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

**The list of a dangerous chemical(2002)/CN-No.:** 32153

## 16. OTHER INFORMATION

**The reference company name of written contents**  
**Company:** TCI (Shanghai) DEVELOPMENT CO., LTD.

## 16. OTHER INFORMATION

**Address:** No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China  
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This MSDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.