



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 1

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Isophorone
Product code: I0151
Company: TCI (Shanghai) DEVELOPMENT CO., LTD.
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Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids Category 4

HEALTH HAZARDS

Acute toxicity (Oral) Category 4
Acute toxicity (Dermal) Category 4
Acute toxicity (Inhalation) Category 5
Skin corrosion/irritation Category 3
Serious eye damage/eye irritation Category 2A
Carcinogenicity Category 2
Specific target organ toxicity
- Single exposure [Category 3] Respiratory tract irritation, Narcotic effects

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 3

Label elements

Pictograms or hazard symbols



Signal word
Hazard statements

Warning
Combustible liquid
May be harmful if inhaled
Harmful if swallowed or in contact with skin
Causes mild skin irritation
Causes serious eye irritation
Suspected of causing cancer
May cause respiratory irritation
May cause drowsiness or dizziness
Harmful to aquatic life

Precautionary statements
[Prevention]

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from flames and hot surfaces. – No smoking.
Avoid breathing mist, vapors or spray.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.

Do not eat, drink or smoke when using this product.

Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

[Response]

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

IF exposed or concerned: Get medical advice or attention.

In case of fire: Use dry chemical, dry sand or foam to extinguish.

[Storage]

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	Isophorone
Percent:	>97.0%(GC)
CAS RN:	78-59-1
Synonyms:	3,5,5-Trimethyl-2-cyclohexen-1-one
Chemical Formula:	C ₉ H ₁₄ O

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
Ingestion:	Get medical advice/attention. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide.
Unsuitable extinguishing media:	Water (It may scatter and spread fire.)
Precautions for firefighters:	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: Remove movable containers if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. 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.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in a suitable absorbent (e.g. rag, dry sand, earth, saw-dust). 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.
Prevention of secondary hazards:	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

Precautions for safe handling

Technical measures:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from flames and hot surfaces. 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 vapour or aerosol will be generated.
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Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions:	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Store away from incompatible materials such as oxidizing agents.
Packaging material:	Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Install a closed system or local exhaust. Also install safety shower and eye bath.
Exposure limits:	
ACGIH TLV(CL):	5 ppm
OSHA PEL(TWA):	25 ppm
Personal protective equipment	
Respiratory protection:	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.
Hand protection:	Impervious gloves.
Eye protection:	Safety goggles. A face-shield, if the situation requires.
Skin and body protection:	Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Liquid
Form:	Clear
Colour:	Colorless - Pale yellow
Odour:	Peppermint-like
Odour threshold:	0.20 ppm
pH:	No data available
Melting point/freezing point:	-8°C
Boiling point/range:	215°C
Flash point:	84°C
Flammability or explosive limits:	
Lower:	0.8%
Upper:	3.8%
Vapour pressure:	40Pa/20°C
Vapour density:	4.8
Relative density:	0.92
Solubility(ies):	
[Water]	Slightly soluble (1.2g/100mL, 25°C)
[Other solvents]	
Soluble:	Ether, Alcohols, Acetone, Many organic solvents
Log Pow:	1.67
Autoignition temperature:	460°C

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	No special reactivity has been reported.
Conditions to avoid:	Open flame
Incompatible materials:	Oxidizing agents, Strong bases, Amines
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	ihl-hmn TCLo:25 ppm ihl-rat LC50:7 g/m ³ orl-rat LD50:1870 mg/kg skn-rbt LD50:1500 uL/kg
Skin corrosion/irritation:	skn-rbt 100 mg/24H MLD
Serious eye damage/irritation:	eye-hmn 25 ppm/15M eye-rbt 920 ug SEV
Germ cell mutagenicity:	msc-mus-lym 400 mg/L sce-ham-ovr 1 g/L
Carcinogenicity:	orl-mus TDLo:128.75g/kg/103W-I orl-rat TDLo:128.75g/kg/103W-I
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	ihl-mus TCLo:115 ppm/6H (6-15D preg) ihl-rat TCLo:115 ppm/6H (6-15D preg)
RTECS Number:	GW7700000

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish:	48h LC50:340 ppm (Oryzias latipes) 96h LC50:>100 mg/L (Oryzias latipes)
Crustacea:	48h EC50:220 mg/L (Daphnia magna)
Algae:	72h EC50:110 mg/L (Selenastrum capricornutum)
Persistence / degradability:	1.5% (by BOD) , 2.6% (by TOC) , 1.0% (by GC)
Bioaccumulative potential(BCF):	1.1 - 1.8 (conc. 0.5 ppm)
Mobility in soil	
Log Pow:	1.67
Soil adsorption (Koc):	200
Henry's Law (PaM³/mol):	0.7

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. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	Does not correspond to the classification standard of the United Nations
UN-No:	Not listed

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

16. OTHER INFORMATION

The reference company name of written contents

Company:	TCI (Shanghai) DEVELOPMENT CO., LTD.
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This SDS 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. The 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.