SAFETY DATA SHEETS

According to the UN GHS revision 10

1: Identification

1.1 GHS Product identifier

Product name	(E)-1,3-Dichloropropene

1.2 Other means of identification

Product number	542-75-6
Other names	(E)-1,3-Dichloropropene

1.3 Recommended use of the chemical and restrictions on use

Identified uses	Industrial and scientific research use.
Uses advised against	no data available

1.4 Supplier's details

Company	Zhongshan Greenrock Technology Co., Ltd.
Address	No. 138, Jinsan Avenue, Sanjiao Town, Zhongshan City, Guangdong Province, China
Telephone	+86-2087066781

1.5 Emergency phone number

Emergency phone number	+86-2087066781
Service hours	Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2: Hazard identification

2.1 Emergency Overview

It is highly corrosive and can cause irreversible damage to the skin and eyes. If in contact, rinse immediately with plenty of water and seek medical help as soon as possible.

2.2 GHS Classification

Flammable liquids : Category 3
Acute toxicity, oral : Category 4
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 2A
Specific target organ toxicity, single exposure; Respiratory tract irritation : Category 3
Carcinogenicity : Category 2

2.3 GHS label elements, including precautionary statements

Pictogram(s)	
Signal word	Warning
Hazard statement(s)	H226 Flammable liquid and vapor H302 Harmful if swallowed H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation H351 Suspected of causing cancer
Precautionary statement(s)	
Prevention	P203 Obtain, read and follow all safety instructions before use. P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof [electrical/ventilating/lighting/.../] equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/fume/gas/mist/vapors/spray. P264 Wash hands [and ...] thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/... P264+P265 Wash hands [and ...] thoroughly after handling. Do not touch eyes.
Response	P318 if exposed or concerned, get medical advice. P319 Get medical help if you feel unwell. P321 Specific treatment (see ... on this label). P330 Rinse mouth. P301+P317 IF SWALLOWED,Get medical help. P302+P352 IF ON SKIN,wash with plenty of water/... P303+P361+P353 IF ON SKIN (or hair),Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P304+P340 IF INHALED,Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES,Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. P332+P317 If skin irritation occurs,Get medical help. P337+P317 If eye irritation persists,Get medical help. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire,Use ... to extinguish.
Storage	P405 Store locked up. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P403+P235 Store in a well-ventilated place. Keep cool.
Disposal	P501 Dispose of contents/container to ...

2.4 Physical and chemical

Acidic or alkaline substances that react with metals to produce flammable hydrogen. May cause violent exothermic reactions when in contact with other substances. At high concentrations, they have strong oxidizing or reducing properties.

2.5 Health hazards

Skin contact: May cause severe burns, tissue necrosis, and scarring. Eye contact: May cause corneal damage, vision loss, or even blindness. Inhalation of vapor or mist may cause respiratory burns and pulmonary edema.

2.6 Environmental hazards

Leakage into the environment can change the pH value of soil and water, causing serious ecological damage. It is highly toxic to aquatic organisms and can cause the death of aquatic organisms and the collapse of the ecosystem.

2.7 Other hazards which do not result in classification

no data available

3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
(E)-1,3-Dichloropropene	(E)-1,3-Dichloropropene	542-75-6	626-466-0	99%

4: First-aid measures

4.1 General advice

Stop contact immediately and remove contaminated clothing; rinse the exposed area with plenty of running water and seek medical attention immediately with the material's SDS. If the corrosive substance is acidic (such as sulfuric acid), neutralize it with a weak alkaline solution (such as 5% sodium bicarbonate) after rinsing. For alkaline corrosive substances (such as sodium hydroxide), neutralize them with a weak acidic solution (such as 1% acetic acid).

4.2 If inhaled

Move to fresh air and keep the airway open. If corrosive vapors (such as hydrochloric acid mist) are inhaled, immediately administer nebulized inhalation (normal saline + dexamethasone). If laryngeal edema or breathing difficulties occur, immediately perform a tracheotomy (requires professional operation) and seek medical attention.

4.3 In case of skin contact

Rinse with plenty of running water for 20-30 minutes (make sure to rinse thoroughly, especially between the fingers, in the armpits, and other folds). If blisters are present, do not prick them; instead, apply a sterile gauze compress (to avoid adhesion). Do not apply oily ointments to avoid affecting subsequent treatment.

4.4 In case of eye contact

Immediately flush with an eyewash or plenty of normal saline for 15-20 minutes (use a gentle flow to avoid direct exposure to the cornea); apply antibiotic eye ointment (such as erythromycin ointment) to the eyelids, wear a sterile eye patch, and seek immediate medical attention from an ophthalmologist.

4.5 If swallowed

Do not induce vomiting (to avoid secondary damage to the esophageal mucosa). If the substance is acidic, take milk or egg white orally (to protect the gastric mucosa). If the substance is alkaline, take diluted vinegar (1:10 ratio) orally. If you carry SDS, seek medical attention immediately for a gastroscopy.

4.6 Most important symptoms and effects, both acute and delayed

Acute symptoms: skin redness, swelling, blisters, ulcers, severe eye pain, photophobia, blurred vision, oral/esophageal burns, and difficulty swallowing; long-term effects: skin scarring, corneal scarring (possibly causing blindness), and esophageal stenosis.

4.7 Protection of first-aiders

Rescuers must wear corrosion-resistant chemical protective clothing, chemical protective gloves (made of fluororubber), chemical goggles and masks; stand upwind when flushing to avoid inhaling volatile corrosive gases; after contact, equipment must be cleaned with a neutralizer and then rinsed with clean water.

4.8 Notes to physician

Inform the doctor of the type of corrosive agent (acid/base), concentration, and duration of contact. Skin burns should be treated according to their depth (superficial II degree and above require skin grafting). Eye injuries should be checked for corneal epithelial integrity and, if necessary, corneal repair drugs (such as recombinant human epidermal growth factor) should be used.

5: Fire-fighting measures

5.1 Unsuitable extinguishing media

Flammable liquids (flash point 23-60°C): Avoid using high-pressure water (diffusing liquids); Flammable solids: Do not use water (some solids release heat when in contact with water, such as sulfur); Aerosols: Do not squeeze leaking tanks (explosion prevention).

5.2 Specific hazards during fire fighting

The combustion of flammable liquids produces a large amount of vapor, which can easily form a flowing fire; the combustion of flammable solids can easily produce toxic smoke and dust (such as plastics); aerosol cans can easily rupture and explode when heated, spraying flames.

5.3 Hazardous combustion products

Carbon monoxide, carbon oxides, organic vapors (such as benzene, toluene); combustion of some solids releases hydrogen chloride and cyanide (when containing chlorine/cyanide components).

5.4 Specific extinguishing methods

Flammable liquids: Use dry powder/foam (ordinary foam) for small areas, and cover large areas with foam + firebreaks to intercept (to prevent flow); Flammable solids: Cover with dry powder/dry sand to avoid wind (to prevent dust from intensifying combustion); Aerosols: Remove surrounding fire sources before extinguishing the fire, use dry powder to extinguish the fire, and it is strictly forbidden to touch the leaking tank.

5.5 Special protective equipment for fire-fighters

Wear fire-resistant clothing, chemical-resistant gloves, and a half-mask respirator (equipped with a vapor filter cartridge); carry a temperature detector (to monitor the tank temperature); and maintain a safe distance of 10 meters from the fire scene during operation.

6: Accidental release measures

6.1 Protective measures for workers

Wear anti-static work clothes, anti-static gloves, and chemical goggles; wear a gas mask (organic vapor filter cartridge) for gases/volatile liquids; wear impact protection for aerosols.

6.2 Environmental protection measure

Liquids/aerosols are prevented from flowing into sewers/rivers, and oil booms + oil absorbent cotton are used to pollute water bodies; gas leaks are monitored for concentration to prevent them from spreading to residential areas; solids are prevented from dust polluting the soil.

6.3 Containment methods for leaked chemicals

Gas: Shut off the leak source (when safe), and use explosion-proof fan to lead the leak to an open area; Liquid: Collect in anti-static container; Solid: Put non-sparking tools into anti-static container; Aerosol: Collect the leaked tank (no squeezing).

6.4 Cleanup methods for chemical spills

Liquid: absorb with a small amount of oil-absorbing cotton and transfer with a large amount of explosion-proof pump; Solid: transfer with spark-free tools (to prevent friction); Aerosol: leaking tanks are collected separately and disposed of professionally.

6.5 Measures to prevent the spread of leaks

Designate a 10-meter isolation zone and prohibit open flames/static equipment; set up fire barriers for liquids and anti-static isolation belts for gases; use explosion-proof ventilation to reduce concentration (explosion limit).

6.6 Container leakage treatment

Gas: Minor leaks should be sealed with anti-static sealant, serious leaks should be transferred after pressure relief; Liquid: Anti-static sealant should be used to seal, serious leaks should be transferred with explosion-proof pump; Aerosol: Do not squeeze, wrap in sealed bag.

6.7 Special considerations

Eliminate static electricity before operation; provide good ventilation to prevent gas accumulation; perform anti-static testing on tools; clean protective equipment and perform anti-static testing after leak treatment.

7: Handling and storage

7.1 Safe storage conditions

Store in a corrosion-resistant warehouse (the floor is epoxy resin coated, and the walls are acid/alkali-resistant tiles); the container is made of corrosion-resistant material (glass fiber reinforced plastic for acid corrosion, high-density polyethylene for alkaline corrosion), with a capacity of ?200L to prevent dumping; the warehouse is equipped with an emergency neutralization tank (volume ?5m³) and equipped with acid/alkali neutralizers (such as sodium carbonate, dilute acetic acid).

7.2 Storage precautions

Store them separately from materials that may come into contact with the skin (such as clothing and gloves) to avoid cross contamination. Use a corrosion-resistant forklift to transport containers and avoid impact. Check the humidity in the warehouse daily (?65%) to prevent moisture from exacerbating corrosion. In case of leakage, immediately absorb it with inert materials (such as sand) and then treat it with a neutralizer.

7.3 VCI Storage Grade

Level 2 (medium-high): Metal pipes and valves are coated with VCI anti-rust paint (acid/alkali resistant type) and maintained once every six months; VCI anti-rust blocks (such as urethane) are placed in the warehouse and replenished once every quarter to prevent corrosion of metal parts.

7.4 Recommended storage temperature

5-35?, avoid sudden temperature changes (such as moving directly from a low temperature environment to a high temperature environment); concentrated acids/bases must be kept at a temperature ?30? to prevent temperature increases from causing increased container pressure; in winter, they must be protected from freezing (temperature ?5?) to prevent the solution from freezing and cracking the container (if the label has a recommended storage temperature, follow the label).

7.5 Handling

For precautions see Safety Data Sheet section 2
Advice on safe handling : Work under hood. Do not inhale substance/mixture.

8: Exposure controls/personal protection

8.1 Respiratory protection

When exposed to corrosive vapors (such as hydrochloric acid mist and sulfuric acid mist), wear a powered air-purifying respirator (APF?50); in high-concentration environments, a positive pressure air respirator is required to avoid inhalation burns to the respiratory tract.

8.2 Recommended Filter type

For acidic corrosive substances, choose Type E filter cartridge (protects against acidic gases such as SO? and HCl); for alkaline corrosive substances, choose Type K filter cartridge (protects against ammonia and amines); if the product contains dust, add Type P2 filter cotton.

8.3 Eye/face protection

Wear chemical protective goggles + full-face mask. The mask must cover the chin. The lens should be made of polycarbonate (corrosion-resistant and impact-resistant). Check the sealing regularly.

8.4 Skin and body protection

Wear corrosion-resistant chemical protective clothing made of fluororubber or polytetrafluoroethylene (PTFE) to avoid direct skin contact; wear an apron (of the same material) with protection covering the chest to the knees.

8.5 Hand protection

Wear corrosion-resistant gloves. For acid corrosion, choose neoprene material; for alkaline corrosion, choose nitrile rubber material. The thickness of the gloves should be ?0.5mm. Perform a water leakage test before use.

8.6 Hygiene measures

Immediately after the operation, rinse the skin with running water for 10 minutes. If there is stinging at the contact site, apply a neutralizer (5% sodium bicarbonate for acid and 1% acetic acid for alkali) for 5 minutes. Do not use irritating skin care products to avoid aggravating skin damage.

9: Physical and chemical properties and safety characteristics

Physical state	Linght yellow liquid
Colour	Colorless to straw-colored liquid
Odour	Pungent odor
Melting point/freezing point	-60oC
Boiling point or initial boiling point and boiling range	108oC
Flammability	Class IC Flammable Liquid: Fl.P. at or above 22.78°C and below 37.78°C.Flammable. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	Lower flammable limit: 5.3% by volume; Upper flammable limit: 14.5% by volume
Flash point	27oC
Auto-ignition temperature	no data available
Decomposition temperature	When heated to decomposition it emits toxic fumes of /hydrogen chloride/.
pH	no data available
Kinematic viscosity	no data available

Solubility	less than 1 mg/mL at 20.5°C
Partition coefficient n-octanol/water	log Kow = 2.06 (cis-isomer), 2.03 (trans-isomer) at 25°C
Vapour pressure	34 mm Hg at 25°C
Density and/or relative density	1.22
Relative vapour density	3.83 (Relative to Air)
Particle characteristics	no data available

10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Flammable liquid.The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.TRANS-1,3-DICHLOROPROPENE reacts with aluminum, aluminum alloys, with other active metals and with some metal salts and halogens. Can react vigorously with oxidizing materials. .

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Incompatible materials: Metals, strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, hydrogen chloride gas

11: Toxicological information

11.1 Acute toxicity

Oral: LD50 Rat oral 140 + or - 25 mg/kg
Inhalation: LC50 F333 rat (female) inhalation 904 ppm (4104 mg/cu m)/4 hr

Dermal: no data available

11.2 Skin corrosion/irritation

no data available

11.3 Serious eye damage/irritation

no data available

11.4 Respiratory or skin sensitization

no data available

11.5 Germ cell mutagenicity

no data available

11.6 Carcinogenicity

NTP: Reasonably anticipated to be a human carcinogen

11.7 Reproductive toxicity

A study of male workers engaged in the manufacture of 1,3-dichloropropene indicated no significant effect on fertility at exposure levels occurring in the work environment. No evidence of developmental toxicity was observed in rats or rabbits exposed to 1,3-dichloropropene by inhalation, but significant maternal toxicity was seen in both species. In one study of rats exposed by inhalation, fewer fetuses per litter were reported at the highest exposure concentration but maternal toxicity was also observed. In other studies, no adverse reproductive effects were observed in rats and mice exposed by inhalation.

11.8 STOT-single exposure

no data available

11.9 STOT-repeated exposure

no data available

11.10 Aspiration hazard

no data available

12: Ecological information

12.1 Toxicity

Toxicity to fish: LC50; Species: Pimephales promelas (Fathead minnow) weight 0.9 g; Conditions: static bioassay without aeration, 18°C, pH 7.2-7.5, water hardness 40-50 mg/L CaCO3, alkalinity 30-35 mg/L; Concentration: 4100 ug/L for 96 hr (95% confidence limit: 3390-4970 ug/L) /Technical material, 100%
Toxicity to daphnia and other aquatic invertebrates: LC50; Species: Daphnia magna (Water flea) 1st instar; Conditions: static bioassay without aeration, 21°C, pH 7.2-7.5, water hardness 40-50 mg/L CaCO3, alkalinity 30-35 mg/L; Concentration: 90 ug/L for 48 hr (95% confidence limit: 63-129 ug/L) /Technical material, 100%

Toxicity to algae: EC50; Species: Anabaena flosaquae (Blue-Green Algae); Conditions: freshwater, static; Concentration: 108000 ug/L for 120 hr (95% confidence interval: 50000-232000 ug/L); Effect: decreased population abundance /96% purity
Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: 1,3-Dichloropropene, present at 100 mg/L, reached 3% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test which classified the compound as not readily biodegradable(1); additional degradation was observed yielding 3-chloro-2-propen-1-ol(1), possibly from hydrolysis and degradation of the hydrolysis products(SRC). A BOD dilution water study using settled domestic wastewater as the microbia1 inoculum found that 5-10 mg/L concentrations of 1,3-dichloropropene were degraded by 54-85% after 7 days of incubation with the faster rates achieved following weekly adaptations(1); however, the rate of biodegradation for 1,3-dichloropropene in natural waters cannot be inferred from this screening study data(3). Common soil bacteria were able to utilize 1,3-dichloropropene as a sole carbon source in pure culture studies(4). Twelve weeks after labeled cis- or trans-1,3-dichloropropene was added to soil and stored in sealed containers, 19% of the cis and 18% of the trans isomers remained in sandy loam and 10% of cis and 22% of trans isomer remained in medium loam(5). After 20 weeks, 5% and 4% of the cis and trans isomer, respectively, remained in sandy loam and 3% and 14%, respectively remained in the medium loam(5); the half-life of the applied dichloropropenes were 3-4 weeks; it was possible that some of the parent compound was lost by volatilization(5). 14C-1,3-Dichloropropene, added at 100 ug/g soil and incubated aerobically in the dark at 25°C, displayed half-lives of 1.8, 12.3, and 61 days using Wahiawa silt clay, Catlin silt loam, and Fuquay loamy sand, respectively(6); degradation products were 3-chloroallyl alcohol, 3-chloroacrylic acid, numerous minor carboxylic acid metabolites, and carbon dioxide(6). Degradation of 1,3-dichloropropene was greatly enhanced in amended soils compared to the unamended soil, and the degree of acceleration varied with the type as well as the rate of amendment(7); compost manure was more effective in stimulating 1,3-dichloropropene degradation than a less decomposed biosolid-manure mix; the acceleration in compost manure-amended soils was a combined result of enhanced chemical and microbial degradation, since sterilization only partially reduced the enhanced degradation(7). Complete mineralization of 1,3-dichloropropene, based on chloride release, can be a matter of years(8). A 5 ug/mL test compound added to a sediment sample from a drainage ditch at an agricultural field station in Marcham, England was readily converted to 3-chloropropionic acid(9). 1,3-Dichloropropene is degraded more rapidly in soil that has a history of treatment with this pesticide than in previously untreated soil(3). While the degradation rates of the cis- and trans- isomers are similar in untreated soil, degradation in previously treated soil has been shown to be more rapid for trans-1,3-dichloropropene than for cis-1,3-dichloropropene(3).

12.3 Bioaccumulative potential

An estimated BCF of 10 was calculated in fish for 1,3-dichloropropene(SRC), using a log Kow of 2.04 (average for the cis- and trans-isomers)(1) and a regression-derived equation(2). According to a classification scheme(2), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

12.4 Mobility in soil

Measured Koc values of 23 and 26 for the cis- and trans- isomers of 1,3-dichloropropene, respectively, have been reported(1). The average Koc for 3 soils with organic carbon of 3.19%, 10.4%, and 55.1% was 27 and 28 for cis- and trans-1,3-dichloropropene, respectively(2). The average maximum Koc values were 20 for sand, 25 for loamy sand, and 41 and 42 for two clay soils(3). According to a classification scheme(4), these Koc values suggest that 1,3-dichloropropene is expected to have very high mobility in soil. The adsorption onto soil from the vapor is greater for the trans- than the cis- isomer(3). The adsorption isotherm for the vapor/soil system is linear(3). When 1,3-dichloropropene is used in farm fields, it is sprayed directly on the ground or injected into the soil(5). Once in the soil, it can exist as a gas or dissolved in water. 1,3-Dichloropropene can adsorb more strongly to soil when it is in the vapor phase than when it is dissolved in water(5). Vapor-phase adsorption can be approximately 3-times greater at 2°C than it is at 20°C, and adsorption isotherms measured for humus sand, peaty sand, and peat indicate vapor-phase Koc values ranging from 450 to 750(5). According to a classification scheme(4), these vapor-phase Koc values suggest that 1,3-dichloropropene may have moderate to low mobility in soil.

12.5 Other adverse effects

no data available

13: Disposal considerations

13.1 Disposal methods for waste chemicals

Acidic corrosives can be treated with alkaline neutralizers (such as sodium carbonate) until neutralized and then disposed of as ordinary waste. Alkaline corrosives can be treated with acidic neutralizers (such as dilute hydrochloric acid) until neutralized and then disposed of. Those that cannot be neutralized must be incinerated at high temperature or chemically decomposed by a professional unit. The container must be thoroughly cleaned before being disposed of.

13.2 Precautions

Neutralization reactions must be conducted in well-ventilated, dedicated facilities, with the reaction rate controlled to prevent splashing. Disposal personnel must wear corrosion-resistant protective gear. The pH value of the neutralized waste must be controlled between 6 and 9. Direct disposal of unneutralized corrosive materials is prohibited. Emergency pools must be established at the disposal site to prevent leakage and contamination.

14: Transport information

14.1 UN Number

ADR/RID: UN2047	IMDG: UN2047	IATA: UN2047

14.2 UN Proper Shipping Name

ADR/RID: DICHLOROPROPENES	IMDG: DICHLOROPROPENES	IATA: DICHLOROPROPENES

14.3 Transport hazard class(es)

ADR/RID: 3	IMDG: 3	IATA: 3

14.4 Packing group, if applicable

ADR/RID: III	IMDG: III	IATA: III

14.5 Environmental hazards

ADR/RID: yes	IMDG: yes	IATA: yes

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
(E)-1,3-Dichloropropene	(E)-1,3-Dichloropropene	542-75-6	626-466-0
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Not Listed.
Australian Inventory of Industrial Chemicals (AIIC)			Not Listed.
Catalogue of Strictly Restricted Toxic Chemicals in China			Not Listed.
China Catalog of Hazardous chemicals 2015			Listed.
European INventory of Existing Commercial chemical Substances			Listed.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			Listed.
TSCA Inventory of Chemical Substances			Listed.

16: Other information

Information on revision

SDS Creation Date	July 1, 2025
SDS Revision Date	July 1, 2025

Abbreviations and acronyms in SDS

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

SDS References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Any questions regarding this Safety Data Sheet, Please send your inquiry to sales@MolBest.com