

Chemical Safety Data Sheet MSDS / SDS

Nitroethylene

Revision Date:2026-05-31 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name : Nitroethylene
CBnumber : CB11012731
CAS : 3638-64-0
Synonyms : Nitroethylene, 1-nitroethylene

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P302+P352 IF ON SKIN: wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continuerinsing.

Hazard statements

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

SECTION 3: Composition/information on ingredients

Substance

Product name	: Nitroethylene
Synonyms	: Nitroethylene, 1-nitroethylene
CAS	: 3638-64-0
MF	: C ₂ H ₃ NO ₂
MW	: 73.05

SECTION 4: First aid measures

First Aid Measures

General advice

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact

Wash off immediately with plenty of water. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Remove to fresh air Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation Call a physician If breathing is irregular or stopped, administer artificial respiration Artificial respiration and/or oxygen may be necessary Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician

Ingestion

Do NOT induce vomiting. Drink plenty of water. Rinse mouth. If symptoms persist, call a physician. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider

Remove all sources of ignition. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

SECTION 5: Firefighting measures

Suitable Extinguishing Media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None.

Specific hazards arising from the chemical

Specific hazards arising from the chemical

No information available.

Hazardous combustion products

Carbon oxides. Nitrogen oxides (NO_x).

Explosion data

Sensitivity to Mechanical Impact

No information available.

Sensitivity to Static Discharge

No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters

As in any fire, wear self contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional

Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Store at -20 °C.

Incompatible materials

None known based on information supplied.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure Guidelines

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Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m3 (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m3 Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m3 STEL: 150 ppm STEL: 560 mg/m3

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls

Showers

Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles. Face protection shield.

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical State	liquid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	110.6 °C
Flash point	6 °C
Density	1.2212
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Solubility	soluble in Chloroform, Methanol, Toluene

SECTION 10: Stability and reactivity

Reactivity

Not applicable

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

No information available.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation

Classified based on available data. For more details, see section 2.

Eye contact

Classified based on available data. For more details, see section 2.

Skin Contact

Classified based on available data. For more details, see section 2.

Ingestion

Classified based on available data. For more details, see section 2.

Information on toxicological effects

Symptoms

Classified based on available data. For more details, see section 2.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity

Avoid repeated exposure. May cause adverse liver effects. Target Organ Effects Central Vascular System (CVS), Central nervous system, Respiratory system, Kidney, Liver, Eyes, Skin. Carcinogenicity The table below indicates whether each agency has listed any ingredient as a

carcinogen.

Chemical Name ACGIH IARC NTP OSHA

Toluene - Group

3 - - 108-88-3

Numerical measures of toxicity - Product Information

Unknown acute toxicity

Classified based on available data. For more details, see section 2

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

1820 mg/kg

ATEmix (dermal)

13363 mg/kg

ATEmix (inhalation-dust/mist)

1.7

ATEmix (inhalation-vapor)

13.9 mg/l

SECTION 12: Ecological information

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Toluene 108-88-3	12.5: 72 h	15.22 - 19.05: 96 h Pimephales promelas mg/L LC50 flow-through 12.6: 96 h		11.5: 48 h Daphnia magna mg/L EC50
	Pseudokirchneriella subcapitata mg/L	Pimephales promelas mg/L LC50 static 5.89 - 7.81: 96 h		5.46 -
	EC50 static 433: 96 h	Oncorhynchus mykiss mg/L LC50 flow-through 14.1 - 17.16: 96 h		9.83: 48 h Daphnia magna mg/L EC50
	Pseudokirchneriella subcapitata mg/L EC50	50.87 - 70.34: 96 h Poecilia reticulata mg/L LC50 static 11.0 - 15.0: 96 h Lepomis macrochirus mg/L LC50 static 54: 96 h Oryzias latipes mg/L LC50 static 28.2: 96 h Poecilia reticulata mg/L LC50 semi-static 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static		Static

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Toluene 12.5: 72 h

15.22 - 19.05: 96 h - 11.5: 48 h Daphnia magna

static 433: 96 h

Pimephales promelas mg/L Static

Persistence and degradability No information available. **Bioaccumulation** No information available. **Mobility** No

information available.

Toluene

2.65 108-88-3

SECTION 13: Disposal considerations

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

US EPA Waste Number

U003 U220

California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Toluene 108-88-3	Toxic Ignitable

Toluene

Toxic

SECTION 14: Transport information

DOT

UN/ID no

UN1294

Hazard Class

3

Packing Group

II

Proper shipping name

Toluene

Description

UN1294, Toluene, 3, II Marine pollutant This product contains a chemical which is listed as a marine pollutant according to DOT

Emergency Response Guide Number

IMDG**UN/ID no**

UN1294

Hazard Class

3

Packing Group

II

Proper shipping name

Toluene

Description

UN1294, Toluene, 3, II, (6°C c.c.)

EmS-No

F-E, S-D

IATA**UN/ID no**

UN1294

Hazard Class

3

Packing Group

II

Proper shipping name

Toluene

Description

UN1294, Toluene, 3, II

SECTION 15: Regulatory information

International Inventories

All of the components in the product are on the following Inventory lists

X - Listed

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

DSL/NDL - 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 and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Chemical name	TSCA	DSL	NDL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Toluene	X	X	-	X	-	X	X	X	X	X

US 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

Acute health hazard

Yes

Chronic Health Hazard

Yes

Fire hazard

Yes

Sudden release of pressure hazard

No

Reactive hazard

No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Toluene 108-88-3	X	X	X

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.