



## Safety Data Sheet

### Toluene

#### SECTION 1: Identification

##### 1.1 GHS Product identifier

Product name Toluene

##### 1.2 Other means of identification

Methylbenzene, toluol, Phenylmethane

##### 1.3 Recommended use of the chemical and restrictions on use

For laboratory and manufacturing use only.

##### 1.4 Supplier's details

Name High Purity Products  
Address 14546 N. Lombard Street  
Portland OR 97203  
United States of America

Telephone 503-227-1616  
email help.desk@highpp.com

##### 1.5 Emergency phone number

CHEMTREC: 1-800-424-9300

#### SECTION 2: Hazard identification

##### 2.1 Classification of the substance or mixture

**GHS classification in accordance with: OSHA (29 CFR 1910.1200)**

- Flammable Liquid, Cat. 2
- Acute toxicity, inhalation, Cat. 4
- Skin irritation, Cat. 2
- Hazardous to the aquatic environment, long-term hazard, Cat. 4
- Aspiration hazard, Cat. 1

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### 2.2 GHS label elements, including precautionary statements

#### Pictogram



#### Signal word

**Danger**

#### Hazard statement(s)target

H225	Highly flammable liquid and vapor.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H413	May cause long lasting harmful effects to aquatic life.
H304	May be fatal if swallowed and enters airways.

#### Precautionary statement(s)

P271	Use only outdoors or in a well-ventilated area.
P241	Use explosion-proof equipment.
P260	Do not breathe gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of containers as hazardous waste
P312	Call a POISON CENTER if you feel unwell.
P381	In case of leakage, eliminate all ignition sources.
P361	Take off immediately all contaminated clothing.
P370+P380	In case of fire: Evacuate area.

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

Constituents	CAS Number	Concentration (Weight)
Toluene	108-88-3	99 – 100%

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

**EYES:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**SKIN:** Remove contaminated clothing/shoes. Flush skin with water for at least 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

**INGESTION:** DO NOT INDUCE VOMITING. Do not attempt to give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

**ACUTE EFFECTS:** Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness and death may occur. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin). In severe cases death may result.

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NOTES TO PHYSICIAN: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration.

### SECTION 5: Fire-fighting measures

#### 5.1 Suitable extinguishing media

Use water fog, "alcohol" foam, dry chemical, or CO<sub>2</sub>.

#### 5.2 Specific hazards arising from the chemical

When heated above the flash point, this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

#### 5.3 Special protective actions for fire-fighters

WARNING! Combustible Liquid. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA. Cool fire exposed containers with water.

### SECTION 6: Accidental release measures

#### 6.1 General Procedures:

WARNING. Combustible. Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.

### SECTION 7: Handling and storage

#### 7.1 General procedures:

Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

#### 7.2 Precautions for safe handling:

Avoid contact with skin and eyes. Do not inhale vapors. Keep away from heat and open flame. Wash thoroughly with soap and water after handling. Store tightly closed containers in cool, dry place.

#### Comments:

KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition; they may explode and cause injury or death. Observe all federal, state, and local regulations and National Fire Protection Association (NFPA) Codes with pertain to the specific local conditions of stage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Constituents	CAS Number	NIOSH REL TWA
Toluene	108-88-3	100 ppm

#### 8.2 Individual protection measures, such as personal protective equipment (PPE)

##### Pictograms



##### Personal Protective Equipment

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**Eyes and Face:** Use chemical safety goggles and full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

**Skin:** Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

**Respiratory:** If exposure may or does exceed occupational exposure limits (Sec. 8) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

**Other use precautions:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear Liquid
Color	Colorless
Odor	Aromatic sweet odor
Odor threshold	No data available.
pH	N/A
Melting point/freezing point	-135°F
Boiling point or initial boiling point and boiling range	203°F
Flash point	39 ° F
Evaporation rate	2.2 (n-Butyl Acetate=1)
Lower explosion limit / flammability limit	1.2%
Upper explosion limit / flammability limit	7%
Vapor Pressure	21.8 mmHg at 20°C
Relative vapor density	No data available.
Density and/or relative density	0.87
Solubility	negligible solubility with water
Auto-ignition temperature	995 ° F
Decomposition temperature	No data available.
Kinematic viscosity	No data available.
Explosive properties	No data available.
<b>Particle characteristics</b>	No data available.

#### SECTION 10: Stability and reactivity

##### 10.1 Reactivity

None under normal use conditions.

##### 10.2 Chemical stability

Stable under recommended storage conditions.

##### 10.3 Possibility of hazardous reactions

No data available.

##### 10.4 Conditions to avoid

Avoid heat, flame, and other sources of ignition.

##### 10.5 Incompatible materials

Strong oxidizers

##### 10.6 Hazardous decomposition products

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Carbon monoxide and unidentified organic compounds may be formed during combustion. There should be no decomposition if stored and applied as directed.

#### SECTION 11: Toxicological information

##### Information on toxicological effects

##### Acute Toxicity

Toluene:

LC50 – inhalation – rat - 8000 ppm/4H

LD50 – oral – rat – 636 mg/kg

##### Skin corrosion/irritation

May cause skin irritation.

##### Serious eye damage/irritation

Causes serious eye irritation.

##### Germ cell mutagenicity

No data available.

##### Carcinogenicity

Not classifiable as a human carcinogen. Data is limited.

##### Reproductive toxicity

developmental toxicant

##### STOT-single exposure

No data available.

##### STOT-repeated exposure

Immunological (Immune System), Neurological (Nervous System)

##### Aspiration hazard

No data available.

#### SECTION 12: Ecological information

##### Toxicity

Toluene:

EC50; Species: Scenedesmus subspicatus (Green Algae) Exponential Growth Phase; Conditions: freshwater, static, 24 °C, pH 8.0-9.3; Concentration: 160000 ug/L for 48 hr; Effect: population, decreased biomass /formulation/

##### Persistence and degradability

Vapor-phase toluene will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 2 days. Toluene may also be degraded in the atmosphere by reaction with nitrate radicals and ozone molecules, but these reactions are too slow to be environmentally important.

##### Bioaccumulative potential

potential for bioconcentration in aquatic organisms is low to moderate.

##### Mobility in soil

toluene is expected to have high to moderate mobility in soil

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### SECTION 13: Disposal considerations

#### Product disposal

Product disposal Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product container or residue.

EPA Waste Code: **U220**

### SECTION 14: Transport information

#### DOT (US)

UN Number: UN1294

Class: 3

Packing Group: II

Proper Shipping Name: Toluene

Reportable Quantity: 1,000 lbs

#### IMDG

UN Number: UN1294

Class: 3

Packing Group: II

Proper Shipping Name: Toluene

#### IATA

UN Number: UN1294

Class: 3

Packing Group: II

Proper Shipping Name: Toluene

### SECTION 15: Regulatory information

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

##### California Prop. 65 Components

This product contains the following chemicals known to the State of California to cause cancer and reproductive toxicity:

Benzene, Toluene

##### Canadian Domestic Substances List (DSL)

Chemical name: Toluene

##### CERCLA RQ Hazardous Substances

Toluene: 1,000 lbs

##### HMIS Rating

Toluene	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	G

##### NFPA Rating

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**SECTION 16: Other information**

**Disclaimer:**

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