



SILVER FERN CHEMICAL, INC.

Safety Data Sheet

Toluene

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Effective Date: 16 May 2023

1.1 Product identifier

Product name: Toluene

Synonym(s): Methylbenzene; Methylbenzol; Phenylmethane; Toluol

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

General Use: None specified

Uses advised against: None specified

1.3 Details of the supplier and of the safety data sheet

Distributor

Silver Fern Chemical, Inc.

2226 Queen Anne Avenue North

Seattle, WA 98109 USA

Customer Service: 1-866-282-3384; info@silverfernchemical.com

Website - www.silverfernchemical.com

1.4 Emergency telephone number: INFO-TRAC +1-800-535-5053; Outside USA & Canada +1-352-323-3500

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Substance

Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008

Flammable Liquid - Category 2 [H225]

Aspiration Hazard - Category 1 [H304]

Skin Irritation - Category 2 [H315]

Single Target Organ Toxicity, Single Exposure - Category 3; STOT SE 3 [H336]

Reproductive toxicity - Category 2 [H361d]

Single Target Organ Toxicity, Repeated Exposure - Category 3; STOT RE 1 [H373]

Aquatic Toxicity, Chronic - Category 3 [H412]

2.2 Label elements

Hazard symbol(s):



GHS02



GHS07



GHS08

Signal word: Danger

Hazard statement(s): H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H361d - Suspected of damaging the unborn child
H373 - May cause damage to the central nervous system, liver and kidneys through prolonged and repeated exposure
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

[Prevention] P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, open flames and hot surfaces. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 + P242 - Use explosion proof electrical, ventilating and lighting equipment. Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe mist or vapor.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing and eye protection.

[Response] P301 + P331 + P310 - IF SWALLOWED: DO NOT induce vomiting. Immediately call a POISON CENTER or doctor.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.

Call a POISON CENTER or doctor if you feel unwell.

P308 + P313 - If exposed or concerned: Get medical attention.

P321 - Specific treatment: Call a POISON CENTER or doctor if you feel unwell. Refer to Section 4 of this SDS.

P332 + P313 - If skin irritation occurs: Get medical attention.

P362 - Take off contaminated clothing and wash before reuse.

P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.

[Storage]

P405 + P403 + P233 + P235 - Store locked up in a well-ventilated place. Keep container tightly closed. Keep cool.

[Disposal]

P501 - Dispose of contents and containers in accordance with national and local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
99 - 100	Toluene	108-88-3	203-625-9	601-021-00-3	H225, H304, H315, H336, H361d, H373

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with the applicable provisions of paragraph (i).

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

3.2 Mixtures

Not applicable

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist or if the victim feels unwell, seek medical attention.

Eyes: Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do after first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or if the victim feels unwell, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of material into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: May cause eye irritation with inflammation, discomfort, tearing and blurred vision. Vapor or mist can cause eye irritation.

Skin: Causes skin irritation with localized redness, itching and discomfort. Prolonged contact with unprotected skin may cause defatting of the skin and dermatitis. May be harmful if absorbed through the skin.

Inhalation: Harmful if inhaled. Causes respiratory tract irritation. Inhalation of high concentrations (>200 ppm) of toluene are clearly associated with central nervous system encephalopathy, headache, dizziness, nausea, drowsiness, depression, lassitude, (weakness, exhaustion), incoordination, transient memory loss and impaired reaction time. Extreme exposures may cause irregular heartbeats, which can be fatal.

Ingestion: Harmful if swallowed. Causes irritation of the digestive tract with nausea, vomiting, abdominal pain and diarrhea. May cause central nervous system depression characterized by excitement, followed by headache, dizziness, drowsiness and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause liver and kidney damage. This material can get into the lungs during swallowing or vomiting causing lung inflammation and chemical pneumonitis, which may be fatal. Symptoms of aspiration into the lungs include coughing, gasping, choking, shortness of breath, bluish colored skin, rapid breathing and rapid heart rate.

Chronic: Individuals with pre-existing skin conditions and respiratory disorders may be more susceptible to the effects of this product. Chronic skin contact may cause defatting, dermatitis or aggravate existing skin problems. Repeated exposure in combination with constant, loud noise can cause hearing loss and dizziness. Toluene abuse has been linked to kidney disease. Intentional abuse of toluene vapors has been linked to damage to the brain, liver, kidneys and to death. Repeated inhalation exposure of toluene to animals causes histological changes in the brain and degeneration of heart tissue. Effects may be delayed. Exposure to this product may harm the unborn child. Refer to Section 11.2.

Chronic hydrocarbon abuse (e.g. sniffing solvents) has been associated with irregular heart rhythms and potential cardiac arrest. Intentional abuse of toluene has been linked to damage to the brain, liver and kidneys and can be fatal.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider active charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a

Trendelenburg and left lateral decubitus position.

If inhaled, this material sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media such as water spray or fog, carbon dioxide, foam and dry chemical.

Unsuitable methods of extinction: Water jets or streams may spread the fire.

5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapor! Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Exposure to ignition sources (e.g. cell phones) can ignite vapors, causing a flash fire. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: Avoid sources of ignition. Vapors may form an explosive mixture with air, especially in confined spaces. Ground and bond containers in storage and when container is in use.

5.3 Advice to firefighters

Firefighters should wear full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. Be aware that burning liquid will float on water.

Firefighters should control runoff to prevent environmental contamination. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately. Spill creates a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

6.3 Methods and materials for containment and cleaning up

Approach spill from upwind direction. DO NOT flush spill down the drain. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material using non-sparking tools and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of contents and containers via a licensed waste disposal contractor.

If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal in accordance with local regulations.

In the USA discharges or spills of material on waters of the United States, their adjoining shorelines or into conduits leading to surface waters must be reported to the National Response Center at 800-424-8802.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 – STORAGE AND HANDLING

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Open containers slowly to control possible pressure release. Wash contaminated clothing and shoes thoroughly before reuse.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. Keep away from heat and ignition sources. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers are hazardous when empty as they contain product residue. Do not cut, drill, weld, braze, solder grind or perform similar operations on or near empty containers. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
108-88-3	Toluene	200 ppm TWA	20 ppm TWA	100 ppm; 375 mg/m ³ TWA; 150 ppm; 560 mg/m ³ STEL 500 ppm IDLH

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

8.2 Exposure controls

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear safety glasses with unperforated side shields or chemical splash goggles during use.

Hand protection: Wear Butyl rubber, chlorinated polyethylene, Viton™ gloves or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory protection: Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.



SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Aromatic
Odor Threshold	2 ppm
Molecular Weight	92.14 g/mol
Chemical Formula	C ₇ H ₈
pH	No data available
Freezing/Melting Point	- 95 °C (- 139 °F)
Initial Boiling Point	110 °C (231 °F)
Evaporation Rate	1.9 [n-BuOAc = 1]
Flammability (solid, gas)	Not applicable
Flash Point	5 °C (41 °F)
Autoignition Temperature	480 °C (896 °F)
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	1.2% (v)
Upper Explosive Limit (UEL)	7.1% (v)
Vapor Pressure	1.03 psi @ 37.8 °C
Vapor Density	3.1 [Air = 1]
Specific Gravity	0.872
Density	0.872 g/ml (7.28 lb/gal)
Viscosity	0.63 mm ² /s @ 25 °C
Solubility in Water	Negligible
Partition Coefficient (n-octanol/water)	log P _{ow} = 2.65
Oxidizing Properties	Not applicable

Explosive Properties Not applicable
Volatiles by Weight @ 21 °C 100%

9.2 Other Data

Flammability Classification IB

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

This material is stable under normal handling conditions and use.

10.2 Chemical Stability

This material is stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air. Reacts with strong oxidizing agents. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Avoid high temperatures, sources of ignition, hot surfaces and contact with incompatible materials. Avoid impact. Avoid use in confined areas.

10.5 Incompatible materials

Strong oxidizing agents, strong acids, nitric acid, sulfuric acid, rubber, various plastics

10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: 5,580 mg/kg [ECHA]

Acute inhalation toxicity

LC₅₀, rat: > 20 mg/l [ECHA]

Acute dermal toxicity

LD₅₀, rabbit: > 5,000 mg/kg [ECHA]

Skin irritation

Causes skin irritation.

Eye irritation

May cause eye irritation.

Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

Suspected of damaging the unborn child.

Specific organ toxicity - single exposure

May cause respiratory irritation, drowsiness or dizziness.

Specific organ toxicity - repeated exposure

Causes damage to the central nervous system, liver and kidneys through prolonged and repeated exposure.

Aspiration hazard

May be fatal if swallowed and enters the airways.

11.2 Further information

Toluene (CAS #108-88-3): IARC, Group 3 carcinogen - Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, NTP or OSHA. Breathing high levels of toluene during pregnancy has been shown to result in children with birth defects and to retard mental abilities and growth. There is evidence that exposure to toluene at work is associated with spontaneous abortion.

Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Several studies of workers suggest long-term exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of the evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. In an epidemiologic study of toluene and pregnancy, occupational exposures to toluene were said to be associated with an increased incidence of renal, urinary, gastrointestinal and cardiac anomalies. Fetotoxicity (reduced fetal weight), behavioral effects (effects of learning and memory) and hearing loss (in males) were observed in the offspring of rats exposed to inhalation of toluene, in the absence of maternal toxicity.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Toxicity to fish:	LC ₅₀ - Oncorhynchus mykiss (Rainbow trout), 96 h: 5.8 mg/l [literature]
Toxicity to aquatic invertebrates:	EC ₅₀ - Daphnia magna (Water flea), 48 h: 6 mg/l [literature]
Toxicity to aquatic plants:	EC ₅₀ - Pseudokirchneriella subcapitata (Green algae), 72 h: 12 mg/l [literature]
Toxicity to bacteria:	EC ₅₀ - Photobacterium phosphoreum (Bacteria), 30 min: 20 mg/l [literature]

12.2 Persistence and degradability

This material is expected to be biodegradable.

12.3 Bioaccumulation potential

The bioaccumulation potential for this product is low.

12.4 Mobility in soil

This material floats on water.

12.5 Results of PBT and vPvB assessment

This material is not persistent, bioaccumulative and toxic (PBT) and not very persistent and very bioaccumulative (vPvB).

12.6 Other effects

Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

RCRA F-Series: No listings above the reportable threshold (de minimis)

RCRA U-Series: Toluene (CAS #108-88-3) U220

SECTION 14 - TRANSPORTATION INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Limited quantity for flammable liquids in Packing Group II when inner packagings are not over 1.0 liter (0.3 gallon) net capacity each, packed in a strong outer packaging.

USA DOT (Ground Transportation)

Proper Shipping Name	Toluene
Hazard Class	3
UN	UN1294
Packing Group	II
NAERG	Guide #130
Packaging Authorization	Non-Bulk: 49 CFR 173.202; Bulk: 173.242
Packaging Exceptions	49 CFR 173.150

Placard(s)



IMO/IMDG (Water Transportation)

Proper Shipping Name	Toluene
Hazard Class	3
UN	UN1294
Packing Group	II
Marine Pollutant	No
EMS Number	F-E, S-D

ICAO/IATA (Air Transportation)

Proper Shipping Name	Toluene
Hazard Class	3
UN	UN1294
Packing Group	II
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 60 l; Passenger Aircraft: 5 l

RID/ADR (Rail Transportation)

Proper Shipping Name	Toluene
Hazard Class	3

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

OSHA Process Safety Management Standard: This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f(2)) and Chemical Code Number Not listed

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: Toluene (CAS #108-88-3): List 2, DEA Chemical code 6594 - 35% by Weight or Volume; exports only; limit applies to toluene or any combination of acetone, ethyl ether, 2-butanone, methyl isobutyl ketone, and toluene if present in the mixture by summing the concentrations for each chemical.

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: Not listed

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories

Highly flammable liquid and vapor	May cause drowsiness or dizziness
May be fatal if swallowed and enters airways	Suspected of damaging fertility or the unborn child
Causes skin irritation	May cause damage to organs through prolonged or repeated exposure

SARA 313 Information: Toluene is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: None of the components of the product exceed the threshold (de minimis) reporting levels of established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substance: Toluene (CAS #108-88-3): RQ = 454 kg (1,000 lb)

Clean Air Act (CAA)

Toluene is a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b).

This product does not contain Class 1 Ozone depleters.

This product does not contain Class 2 Ozone depleters.

Clean Water Act (CWA)


Toluene is a Hazardous Substance.

Toluene is a Priority Pollutant.

Toluene is a Toxic Pollutant.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

 **WARNING:** This product will expose you to Toluene, which is known to the state of California to cause birth defects or reproductive harm. This product may expose you to Benzene (< 600 ppm), which is known to the state of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Other U.S. State Inventories

Toluene (CAS #108-88-3) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, IL, ME, MA, MI, MN, NJ, NY, NC, PA, RI, WA, WI.

Canada

WHMIS Hazard Classification

Highly flammable liquid and vapor	May cause drowsiness or dizziness
May be fatal if swallowed and enters airways	Suspected of damaging fertility or the unborn child
Causes skin irritation	Causes damage to organs through prolonged or repeated exposure

Canadian National Pollutant Release Inventory (NPRI): Toluene is listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 3 (highly hazardous to water)

Global Chemical Inventory Lists

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes

Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product comply with the inventory requirements administered by the governing country.
No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment

A chemical safety assessment was not carried out for this product.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)



C = safety glasses, gloves and an apron

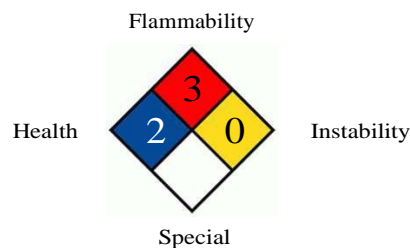
HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe
* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate
3 = High 4 = Extreme

National Fire Protection Association (NFPA)



Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists	LD _{Lo}	Lowest Lethal Dose
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	mppcf	Millions of Particles Per Cubic Foot
CAS	Chemical Abstract Services	NA	North America
CFR	Code of Federal Regulations	NAERG	North American Emergency Response Guide Book
COC	Cleveland Open Cup	NIOSH	National Institute for Occupational Safety & Health
DOT	Department of Transportation	NTP	National Toxicology Program
EC ₅₀	Half maximal effective concentration	OSHA	Occupational Safety and Health Administration
EMS	Emergency Response Procedures for Ships Carrying	PBT	Persistent, Bioaccumulating and Toxic
EPA	Environmental Protection Agency	PEL	Permissible exposure limit
ErC ₅₀	Reduction of Growth Rate	PMCC	Pensky-Martens Closed Cup
ERG	Emergency Response Guide Book	ppm	Parts Per Million
FDA	Food and Drug Administration	RCRA	Resource Conservation and Recovery Act
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	RID	Dangerous Goods by Rail
HCS	Hazard Communication Standard	RQ	Reportable Quantity
IARC	International Agency for Research on Cancer	TCC/Tag	Tagliabue Closed Cup
IATA	International Air Transport Association	TLV	Threshold Limit Value
IC ₅₀	Half Maximal Inhibitory Concentration	TSCA	Toxic Substance Control Act
ICAO	International Civil Aviation Organization	TWA	Time-weighted Average
IDLH	Immediately Dangerous to Life and Health	UN	United Nations
IMDG	International Maritime Dangerous Goods	VOC	Volatile Organic Compounds
IMO	International Maritime Organization	vPvB	Very Persistent and Very Bioaccumulating
LC ₅₀	50% Lethal Concentration	WHMIS	Workplace Hazardous Materials Information System
LD ₅₀	50% Lethal Dose		

DISCLAIMER OF RESPONSIBILITY

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