

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

Skin contact: IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Ingestion: IF SWALLOWED: Immediately call a poison center/doctor. Do NOT induce vomiting. Rinse mouth.

Most important symptoms/effects: Irritation. Drowsiness and dizziness. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed, if necessary:

Notes to physician: Treat symptomatically.

Specific treatments: Show this safety data sheet to the doctor in attendance.

SECTION 5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical:

Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Special protective equipment for fire-fighters: Use appropriate equipment for surrounding fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precaution, protective equipment and emergency procedures: Keep unnecessary personnel away. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Extinguish all flames in the vicinity. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and clean-up:

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Cover with plastic sheet to prevent spreading. Collect spillage. Following product recovery, flush area with water. Prevent product from entering drains. Do not allow material to contaminate ground water system. Clean surface thoroughly to remove residual contamination. Wipe up with absorbent material (e.g. cloth, fleece).

Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Should not be released into the environment. Do not allow material to contaminate ground water system. Prevent product from entering drains.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Eliminate sources of ignition. Avoid spark promoters. Wear personal protective equipment. Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities: KEEP OUT OF REACH OF CHILDREN. Store locked up. Keep tightly closed in original container. Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	CAS	OSHA PEL	ACGIH TLV	NIOSH REL
Toluene	108-88-3	TWA: 200 ppm Ceiling: 300 ppm	TWA: 20 ppm	TWA: 375 mg/m ³ 100 ppm STEL: 560 mg/m ³ 150 ppm

Appropriate engineering controls: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures (PPE):

Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

Eye protection: Chemical Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Hand protection: Wear suitable protective gloves.

Skin and body protection: If major exposure is possible, wear suitable protective clothing and footwear.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be implemented whenever workplace conditions warrant use of a respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Blue liquid	U/L flammability or explosive limits	Flam L – 1.2% Flam U – 7.1%
Odor	Sweet / Pungent	Vapor pressure	Not determined
Odor threshold	Not determined	Vapor density	3.14
pH	Not applicable	Relative density (specific gravity)	Not determined
Melting point/freezing point	42°F (5.56°C)	Solubility(ies)	Very slightly soluble
Initial boiling point and boiling range	230°F (110°C)	Partition coefficient: n-octanol/water	Not determined
Flash point	40°F (4.8°C) closed cup	Auto-ignition temperature	996°F (535°C)
Evaporation rate	2 (n-butyl acetate = 1)	Decomposition temperature	Not determined
Flammability (solid, gas)	Not determined	Viscosity	Not determined

SECTION 10 STABILITY AND REACTIVITY

Reactivity: Stable under normal conditions.

Chemical stability: Stable under normal temperature conditions and recommended use.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to Avoid: Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

Incompatible materials: Strong oxidizing agents. Reducing agents. Acids. Alkalis.

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Ingestion: Harmful if swallowed. May be fatal if swallowed and enters airways.

Inhalation: May cause drowsiness or dizziness. May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Eye contact: Causes eye irritation.

Skin contact: Causes skin irritation.

Symptoms related to the physical, chemical and toxicological characteristics: Irritation. Drowsiness and dizziness. May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Numerical measure of toxicity, component information:

Chemical name	CAS	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Toluene	108-88-3	636 mg/kg (rat)	14.1 ml/kg (rabbit)	49,000 mg/m ³ , 4 hours

Acute toxicity: Harmful if swallowed - may enter lungs if swallowed or vomited.

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes eye irritation.

Respiratory sensitization: Not assigned.

Skin sensitization: Not assigned.

Germ cell mutagenicity: Not assigned.

Carcinogenicity: This material is not classified as a carcinogen by IARC, ACGIH, NTP or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity: Toluene (CAS 108-88-3): 3 Not classifiable as to carcinogenicity to humans.

Reproductive Toxicity: May damage fertility or the unborn child. Avoid contact during pregnancy/while nursing. Toluene: May adversely affect the developing fetus.

Specific target organ toxicity, single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity, repeated exposure: May cause damage to organs (central nervous system) through prolonged or repeated exposure.

Chronic effects: Toluene has been reported to decrease immunological responses and cause recordable hearing loss in laboratory animals. Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication.

Further information: Abusive inhalation of toluene ("glue sniffing") has been reported to be associated with birth defects in the offspring of abusers.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity: No information available.
Persistence and degradability: No information available.
Bioaccumulation potential: No information available.
Mobility in soil: No information available.
Other adverse effects: None known.

SECTION 13 DISPOSAL CONSIDERATIONS

Unused product: This product, as sold, if discarded or disposed, is a hazardous waste according to federal regulations. Dispose of container and contents in accordance with local, regional, national and international regulations.
Contaminated containers or packaging: Do not reuse empty containers. Dispose of packaging or containers in accordance with local, regional, national and international regulations.
RCRA Hazard Class: D001 Flammable material with a flash point <140°F. U220: Waste toluene.

SECTION 14 TRANSPORT INFORMATION

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (ground), IMDG	Aerosols, Limited Quantity	UN1950	–	2.1
IATA	Not suitable for air shipment as packaged from factory			

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are on the U.S. Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are exempt.
CERCLA: Toluene (108-88-3); RQ 1000 lbs.
SARA TITLE III:
Section 311/312 Hazard Category:
 Acute: Yes Chronic: Yes Fire: Yes Sudden Release of Pressure: No Reactive Hazard: No
Section 313 Reportable Ingredients: Toluene (108-88-3)
CALIFORNIA (Proposition 65): WARNING: This product contains the following chemicals known to the State of California to cause cancer and birth defects or other reproductive harm: Toluene (108-88-3), Benzene (71-43-2).

SECTION 16 OTHER INFORMATION

Date Prepared: Apr. 03, 2015 **Replaces:** Apr. 03, 2014

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