

Safety Data Sheet (SDS)

3/10/2025: Reviewed file, more current MSDS/SDS not available. CAS

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Toluene

Signal Word
DANGER

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

Chemtrec Emergency Phone Number: (800) 424-10442

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Aspiration hazard (Category 1). May be fatal if swallowed and enters airways (H304).

Hazard class: Skin irritation (Category 2). Causes skin irritation (H315).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

Hazard class: Reproductive toxicity (Category 2). Suspected of damaging fertility or the unborn child (H361). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373). Do not breathe mist, vapors or spray (P260). Do not eat, drink or smoke when using this product (P270).



SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Toluene	108-88-3	C ₆ H ₅ CH ₃	94.14	
Synonyms: Methyl benzene; Toluol				

SECTION 4 — FIRST AID MEASURES

Get medical advice or attention if you feel unwell (P314).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists eyes:** Get medical advice or attention (P337+P313).

If on skin or hair: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).

If swallowed: Immediately call a POISON CENTER or physician (P301+P310). Do NOT induce vomiting (P331).

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid.

Flash point: 4 °C Flammable limits: Lower: 1.1% Upper: 7.1% Autoignition Temperature: 480 °C

Dangerous fire risk.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA Code

H-2

F-3

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.

Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can. Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or in a well-ventilated area. Use explosion-proof electrical and ventilating equipment (P241).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or in a well-ventilated area.

Exposure guidelines: PEL 200 ppm, Ceiling 300 ppm (OSHA); TLV 20 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid; benzene-like odor.

Boiling point: 111 °C

Soluble: Alcohol and ether. Insoluble in water.

Melting point: -93 °C

Specific gravity: 0.866

Vapor density: 3.2

Vapor pressure: 22 mmHg

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, severe irritant, lung irritation, chest pain and edema, which may be fatal.

ORL-RAT LD₅₀: 5000 mg/kg

IHL-RAT LC₅₀: 26700 ppm/1H

Chronic effects: N.A.

SKN-RBT LD₅₀: 12124 mg/kg

Target organs: Brain, liver, kidneys, bladder.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Toluene. Hazard class: 3, Flammable liquid. UN number: UN1294. Packing group II

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (203-625-9), RCRA code U220.

SECTION 16 — OTHER INFORMATION

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OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

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