

Toluene ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Toluene ACS

Synonyms/Generic Names: Toluol, Methylbenzene, Phenylmethane

Product Number: 5885

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Words: Danger

Pictograms:



GHS Classification:

Flammable liquid	Category 2
Skin irritation	Category 2
Eye irritation	Category 2A
Reproductive toxicity	Category 2
Specific target organ toxicity-single exposure-central nervous system	Category 2
Specific target organ toxicity-single exposure	Category 3
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 2

GHS Label Elements, including precautionary statements:

Hazard Statements:

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H401	Toxic to aquatic life.

Precautionary Statements:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

NFPA Ratings

Health	2
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Toluene	>99	108-88-3	203-625-9	C ₇ H ₈	92.14 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated

	clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. Vapors can travel to a source of ignition and flash back. Containers may explode in a fire. Cool containers from a distance using water spray. SENSITIVE TO STATIC DISCHARGE. See also Stability and Reactivity section.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area. Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation and grounding. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in tightly closed, original containers in a cool, dry, well ventilated area. Store between 55-100°F for product stability. Do not store with strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Toluene	200 ppm	PEL	USA OSHA
	500 ppm (10 min. peak)	STEL	USA OSHA
	20 ppm	TLV	USA ACGIH
	100 ppm	REL	USA NIOSH
	500 ppm	IDLH	OSHA

TWA: Time Weighted Average over 8 hours of work.
 TLV: Threshold Limit Value over 8 hours of work.
 REL: Recommended Exposure Limit
 PEL: Permissible Exposure Limit
 STEL: Short Term Exposure Limit usually 15 minutes.
 IDLH: Immediately Dangerous to Life or Health
 WEEL: Workplace Environmental Exposure Levels
 CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid.
Odor	Sweet, pungent
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-95°C (-139°F)
Initial boiling point and boiling range	111°C (232°F)
Flash point	4°C (40°F)
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	LEL: 1.2% UEL:7.1%
Vapor pressure	(@20°C) 22 mmHg
Vapor density	(air=1) Not Available
Relative density	Not Available
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Log Pow: -2.10
Auto-ignition temperature	480°C (896°F)
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Vapors may form explosive mixture with air.
Conditions to Avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LD50 Dermal- rabbit- 12,196 mg/kg
Eyes	Eyes- rabbit- Severe eye irritation- 24 h
Respiratory	LC50 Inhalation – rat – 4h- 12,500-38,800 mg/m ³

Ingestion	LD50 Oral- rat- > 5,580 mg/kg
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Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Burning, itching, redness. May be harmful if absorbed through skin.
Eyes	Redness, excessive blinking and watering eyes.
Respiratory	Coughing, wheezing, headache, disorientation, blurred vision, dizziness, fatigue or nausea.
Ingestion	Nausea, vomiting.

Chronic Toxicity	Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals.
Teratogenicity	Spermatogenesis (including genetic material, sperm morphology, motility, and count).
Mutagenicity	Not Known
Embryotoxicity	Fetotoxicity (except death, e.g., stunted fetus).
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 - Lepomis macrochirus (Bluegill) - 74.00 - 340.00 mg/l - 96 h LC50 - Oncorhynchus mykiss (rainbow trout) - 7.63 mg/l - 96 h NOEC - Pimephales promelas (fathead minnow) - 5.44 mg/l - 7 d LOEC - Pimephales promelas (fathead minnow) - 8.04 mg/l - 7 d
Aquatic Invertebrate	EC50 - Daphnia magna (Water flea) - 8.00 mg/l - 24 h Immobilization EC50 - Daphnia magna (Water flea) - 6 mg/l - 48 h
Terrestrial	EC50 - Chlorella vulgaris (Fresh water algae) - 245.00 mg/l - 24 h EC50 - Pseudokirchneriella subcapitata (green algae) - 10.00 mg/l - 24 h

Persistence and Degradability	Not Available.
Bioaccumulative Potential	Leuciscus idus (Golden orfe)- 3 d; Bioconcentration factor (BCF): 94
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	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 or residue.
Product Containers	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.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORT INFORMATION

US DOT	UN1294, Toluene, 3, pg II
TDG	UN1294, TOLUENE, 3, pg II
IMDG	UN1294, TOLUENE, 3, pg II
Marine Pollutant	No
IATA/ICAO	UN1294, Toluene, 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Listed: Toluene
Massachusetts: Toxic or Hazardous Substance List	Not Listed
New Jersey: Right to Know Hazardous Substance List	Listed: Toluene
Pennsylvania: Hazardous Substance List	Listed: Benzene, Methyl-
Rhode Island: Hazardous Substance List	Listed: Methylbenzene
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: Toluene
WHMIS Canada	Class B2: Flammable and combustible material- Flammable liquid Class D2A: Poisonous and infectious material- Other effects- Very toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	07/25/2011
Revision 2	06/06/2012
Revision 3	02/02/2016
Revision 4	11/13/2017
Revision 5	09/22/2020

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