

TOLUENE

9680-LIQUID

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Toluene**SDS Code:** 9680-Liquid**Related Part #** 9680-945ML, 9680-3.78L

Recommended Use and Restriction on Use

Use: Solvent**Uses Advised Against:** Not available

Details of Manufacturer or Importer

ManufacturerMG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA**☎** +1-800-340-0772**FAX** +1-800-340-0773**E-MAIL** support@mgchemicals.com**WEB** www.mgchemicals.com**☎** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** info@mgchemicals.com**E-MAIL** (Competent Person): sds@mgchemicals.com

Emergency Phone Number




For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**
(Service access code: 335388)**For emergencies involving the transport of dangerous goods;** 24/7 service
CANADA—Call CANUTEC collect at **+1-613-996-6666** or ***666** on cellular phones

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Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Aspiration Hazard	1	Danger	Health
Specific Target Organ Toxicity Repeated Exposure	2	Warning	Health
Reproductive Toxicity	2	Warning	Health
Flammable Liquid	2	Danger	Flame
Skin Irritation	2	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity). Severity categories rankings do not allow comparisons between classes.

Label Elements

Signal Word	DANGER
Pictograms	Hazard Statements
	H304: May be fatal if swallowed and enters airways H373: May cause damage to central nervous system and inner ear through prolonged or repeated exposure H361: Suspected of damaging fertility or the unborn child
	H225: Highly flammable liquid and vapor
	H315: Causes skin irritation H336: May cause drowsiness and dizziness

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Prevention	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 and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P243	Take action to prevent static discharges.
P260	Do not breathe mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
Response	Precautionary Statements
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, water fog, or chemical foam to extinguish.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P303 + P360 + P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of water or shower.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
Storage	Precautionary Statements
P403 + P235	Store in well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	Precautionary Statements
P501	Dispose of contents/container in accordance to local/regional/international regulations.

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Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Defats skin	Repeated exposure may cause skin dryness or cracking.	<i>None</i>	<i>None</i>

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
108-88-3	toluene	100%

Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF SWALLOWED	P301 + P310, P331
Immediate Symptoms	<i>burning sensation, abdominal pain, nausea</i>
Response	Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
IF ON SKIN (or hair)	P303 + P361 + P352, P332 + P313, P308 + P313, P363
Immediate Symptoms	<i>Redness, irritation, dry skin</i>
Response	Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation occurs: Get medical advice/attention If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.
IF INHALED	P304 + P340, P312
Immediate Symptoms	<i>cough, sore throat, drowsiness, dizziness, headache, nausea</i>
Response	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>redness, severe irritation, pain</i>
Response	Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.
Specific Hazards	The vapors are heavier than air and may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion.
Combustion Products	Produces carbon oxides (CO, CO ₂).
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Remove or keep away all sources of extreme heat or open flames. Do not breathe mist/vapors/spray.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment	Contain with inert absorbent (such as soil, sand, vermiculite).
Cleaning	Collect the liquid in a sealable, solvent-resistant container with an electrically protected vacuum cleaner, chemical absorbent, or chemical spill pad. RECOMMENDATION: Use a grounded stainless steel or carbon steel container.
Disposal	Dispose of spill waste according to Section 13.

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Section 7: Handling and Storage

Prevention	<p>Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.</p> <p>Keep away from heat/sparks/open flames/hot surfaces. No smoking.</p> <p>Ground and bond container and receiving equipment. Take action to prevent static discharges. Use explosion-proof electrical/ventilating/lighting equipment.</p> <p>Do not breathe mist/vapors/spray. Use only outdoors or in well-ventilated area. In cases of inadequate ventilation wear respiratory protection.</p>
Handling	<p>Wear protective gloves/eye protection/face protection.</p> <p>Wash hands thoroughly after handling.</p>
Storage	<p>Keep container tightly closed.</p> <p>Store in a well-ventilated area. Keep cool.</p> <p>Store locked up.</p>

Section 8: Exposure Controls/Personal Protection
Substances with Occupational Exposure Limit Values

Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
toluene	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	200 ppm	300 ppm
	Canada AB	50 ppm	Not established
	Canada BC	20 ppm	Not established
	Canada ON	20 ppm	Not established
	Canada QC	100 ppm	150 ppm

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from RTECS² database and data from suppliers' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

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TOLUENE**9680-LIQUID****Engineering Controls**

Ventilation Keep airborne concentrations below the occupational exposure limits (OEL).

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection For incidental contacts, use disposable nitrile, neoprene, or other chemically resistant gloves.

Respiratory Protection For over-exposures up to 10 x OEL of mist/vapors/spray, wear respirator such as a half-mask respirator with organic vapor cartridges and particulate filter.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

RECOMMENDATION: Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

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Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit	1.2%
Appearance	Clear	Upper Flammability Limit	8%
Odor	Aromatic	Vapor Pressure @20 °C	30 hPa [22.5 mmHg]
Odor Threshold	1.74 ppm	Vapor Density	3.1 (Air =1)
pH	Not available	Specific Gravity @25 °C	0.87
Freezing/Melting Point	-95 °C [-139 °F]	Solubility in Water	Immiscible
Boiling Point	110 °C [230 °F]	Partition Coefficient	Not available
Flash Point	4 °C [39 °F]	Auto-ignition Temperature	407 °C [765 °F]
Evaporation Rate	2.2 (ButAc = 1)	Decomposition Temperature	Not available
Flammability (solid, gas)	Not available	Viscosity @40 °C	<20.5 mm ² /s

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, excessive heat, and incompatible substances. Vapors may form explosive mixture with air.
Incompatibilities	strong oxidizing agents, strong acids
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

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Section 11: Toxicological Information
Routes of Entry

Ingestion, Skin contact, Inhalation, and Eye contact

Symptoms Summary

Ingestion	Causes burning sensation, abdominal pain, and nausea.
Skin	Causes skin redness, skin irritation, and dry skin.
Inhalation	May cause cough, sore throat, drowsiness, dizziness, headaches, nausea, and unconsciousness.
Eyes	Causes redness, severe irritation, and pain.
Chronic	<p>Prolonged or repeated exposure may cause skin dryness and cracking, defat skin, and local redness and discomfort.</p> <p>Ingestion or inhalation of toluene during pregnancy may increase the chances fetal death and developmental defects.</p> <p>Prolonged or repeated overexposure may damage the central nervous system. Long term exposure to loud noises and product vapors may lead to some hearing loss.</p>

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
toluene	5 580 mg/kg Rat	12 124 mg/kg Rabbit	49 g/m ³ 4h Rat

Note: Toxicity data from the RTECS² and ECHA were consulted. The data from supplier (M)SDS were also consulted.

Other Toxicological Effects

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.

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TOLUENE**9680-LIQUID****Carcinogenicity**
(risk of cancer)

Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.

Mutagenicity
(risk of heritable genetic effects)

Based on available data, the classification criteria are not met.

Reproductive Toxicity
(risk to sex functions)

At high doses, spermatogenesis was observed in male rat by inhalation of toluene.

Teratogenicity
(risk of fetus malformation)

Fetotoxicity is observed in animal studies for inhalation and oral exposures for toluene.

STOT-single exposure

Inhalation of toluene may affect the central nervous system and may cause drowsiness, dizziness, and narcotic effects

STOT-repeated exposure

Contains toluene, which is a Cat 2 STOT repeated exposure hazard for the central nervous system and cochlear systems.

Toluene is an ototoxic chemical according to rat studies: inhalation exposure in the presence of noise may lead to cochlear impairment.

Aspiration hazard

The liquid content is classified as Cat 1 aspiration hazard. It is composed of >10% Cat 1 substances and the kinematic viscosity is <20.5 mm²/s at 40 °C.

Section 12: Ecological Information

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

Toluene is an acute category 2 environmental toxicant with minimal LC50 96 h of 7.63 mg/L for *Oncorhynchus mykiss* (rainbow trout); EC50 24 h of 8.9 mg/L *Daphnia magna* (water flea); EC50 24 h of 10 mg/L *Pseudokirchneriella subcapitata* (green algae).

Acute Ecotoxicity

Based on available data, the classification criteria are not met.

Chronic Ecotoxicity

Based on available data, the classification criteria are not met.

Biodegradability

Not available

Other Effects

Volatile Organic Compounds (VOC) = 100% [870 g/L]

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Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 5 L and under

Limited Quantity



Sizes greater than 5 L

UN number: UN1294
Shipping Name: TOLUENE
Class: 3
Packing Group: II
Marine Pollutant: No
Flash Point = 4 °C [39 °F]



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes up to 60 L (passenger), 220 L (cargo)

UN number: UN1294
Shipping Name: TOLUENE
Class: 3
Packing Group: II
Marine Pollutant: No
Flash Point = 4 °C [39 °F]

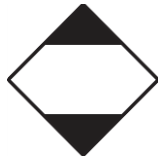


Sea

Refer to IMDG regulations.

Sizes 5 L and under

Limited Quantity



Sizes greater than 5 L

UN number: UN1294
Shipping Name: TOLUENE
Class: 3
Packing Group: II
Marine Pollutant: No
Flash Point = 4 °C [39 °F]



Note: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

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Section 15: Regulatory Information

Canada

Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL/NDSL.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

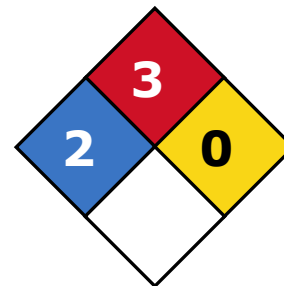
USA

Other Classifications

HMIS® RATING

HEALTH:	*	2
FLAMMABILITY:		3
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:		

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product contains toluene, which is listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains toluene (CAS# 108-88-3; reportable quantity = 1 000 lb), which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

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California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, June 06, 2014 revision, USA).

This product contains toluene, which is listed as reproductively toxic.

Europe**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by	Michel Hachey
Date of Revision	13 March 2020
Supersedes	03 November 2016
Reason for Changes:	Update to the emergency phone number information.

References

- 1) ACGIH 2013 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2013).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

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TOLUENE**9680-LIQUID**

Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

Email: support@mgchemicals.com

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