

Preparation Date: 01/01/2019

Revision Date: N/A

Revision Number: N/A

1. IDENTIFICATION

Product identifier

Product code: C8340
Product Name: TOLUENE, REAGENT, ACS

Other means of identification

Synonyms: Benzene, methyl-
Methacide
Methane, phenyl-
Phenylmethane
Methylbenzene
Methylbenzol
Tolueno (Spanish)
Toluène (French)
Toluol
Tolu-Sol

CAS #: 108-88-3
RTECS # XS5250000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Solvent. Inks. Paints. Coatings.
Uses advised against No information available

Supplier: **Dawn Scientific Inc**
121 Liberty Street, Metuchen, NJ, 08840
Tel : 732-902-6300 | Fax : 973-802-1005
sales@dawnscientific.com | www.dawnscientific.com

Emergency telephone number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

	Category 1
Flammable liquids	Category 2

Label elements

Danger

Hazard statements

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



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/ .? /equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep cool
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

In case of fire: Use CO2, dry chemical, or foam to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

t medical advice/attention

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

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

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Do NOT induce vomiting

Rinse mouth

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Toluene 108-88-3	108-88-3	100	*

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes skin irritation. Causes serious eye irritation. Vapors irritating to eyes and respiratory tract. Drowsiness. Dizziness. May cause headache. Coughing and wheezing. May cause pulmonary edema. Ingestion may cause nausea, vomiting, and diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Dry chemical. Carbon dioxide (CO₂). Water spray mist or foam.

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon monoxide; Carbon dioxide

Specific hazards:

Flammable
May be ignited by heat, sparks or flames
Vapor may travel considerable distance to source of ignition and flash back
Vapors may form explosive mixtures with air
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)
Container explosion may occur under fire conditions or when heated
Fire may produce irritating, corrosive and/or toxic gases

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Take precautionary measures against static discharges. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Acids. Silver perchlorate. Sodium difluoride. Tetranitromethane. Uranium hexafluoride. Bromine trifluoride. Nitrogen oxides. Halogens.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Toluene 108-88-3	200 ppm TWA 300 ppm Ceiling	100 ppm TWA 375 mg/m ³ TWA 150 ppm STEL 560 mg/m ³ STEL	20 ppm TWA	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Toluene 108-88-3	50 ppm TWA 188 mg/m ³ TWA	20 ppm TWA	20 ppm TWA	50 ppm TWAEV 188 mg/m ³ TWAEV

Australia and Mexico

Components	Australia	Mexico
Toluene 108-88-3	574 mg/m ³ STEL 150 ppm STEL 50 ppm TWA 191 mg/m ³ TWA	50 ppm TWA 188 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron. Long sleeved clothing. Gloves.

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.	Appearance: No information available	Color: Clear. Colorless.
Odor: Strong. Pungent. Sweet. Benzene-like.	Taste No information available	Molecular/Formula weight: 92.14
Formula: C7-H8	Flammability: No information available	Flash point (°C): 4
Flashpoint (°C/°F): 4.44 °C/40 °F 16 °C/60.6 °F	Flash Point Tested according to: Closed cup Open cup	Autoignition Temperature (°C/°F): 480-536 °C/896-996.8 °F
Lower Explosion Limit (%): 1.1- 1.4%	Upper Explosion Limit (%): 7.0 - 7.9%	pH: No information available
Melting point/range(°C/°F): -95 °C/-139 °F	Boiling point/range(°C/°F): 110.6 °C/231.1 °F	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Specific gravity: 0.8636-0.866 20 °C	Density (g/cm3): No information available
Vapor pressure @ 20°C (kPa): 2.93	Evaporation rate: No information available	Vapor density: 3.1
VOC content (g/L): 863-866	Odor threshold (ppm): 1.03-2.14	Partition coefficient (n-octanol/water): 2.11-2.79
Viscosity: No information available	Miscibility: Miscible with alcohol Miscible with Chloroform Miscible with Acetone Miscible with Ether Miscible with glacial Acetic Acid Miscible with Carbon disulfide	Solubility: Practically insoluble in water Soluble in Ethanol Soluble in Ether Soluble in Benzene Soluble in Chloroform Soluble in Acetone Soluble in Carbon Disulfide Soluble in glacial Acetic acid

10. STABILITY AND REACTIVITY

Reactivity

Reacts vigorously with oxidizing agents

Reactive with strong oxidizers, silver perchlorate, sodium difluoride, tetranitromethane, Uranium Hexafluoride

Toluene reacts explosively reaction with the following: 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione, dinitrogen tetroxide, uranium hexafluoride, sulfur dichloride, bromine trifluoride, N2O4, AgClO4, concentrated Nitric acid, and Sulfuric acid + Nitric acid.

Toluene forms an explosive mixture with Tetranitromethane.

Reacts photochemically with nitrogen oxides or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Oxidizing agents. Acids. Silver perchlorate. Sodium difluoride. Tetranitromethane. Uranium hexafluoride. Bromine trifluoride. Nitrogen oxides. Halogens.

Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Skin. Eyes. Inhalation.

Acute Toxicity

Component Information

Toluene - 108-88-3

LD50/oral/rat = 636 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rat = 12124 mg/kg Dermal LD50 Rat

LD50/dermal/rabbit = 8390 mg/kg Dermal LD50 Rabbit

26.4 mg/kg (RTECS)

LC50/inhalation/rat = 12.5 mg/L Inhalation LC50 Rat 4 h

26700 ppm Inhalation LC50 Rat 1 h

LC50/inhalation/mouse = 30000 mg/m³ 2 h (RTECS)

19900 mg/m³ 7 h (RTECS)

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE-Acute Tox Oral = 636mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 8390mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = 12124mg/kg

LC50/inhalation/rat

VALUE-Vapor = 12.5mg/l

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = 19900 mg/m³

No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes skin irritation. Mild skin irritation. Moderate skin irritation.
Eye Contact:	Causes serious eye irritation. Causes conjunctivitis. Causes lacrimation. Causes blepharospasm, corneal edema, corneal abrasions. Irritating, but will not permanently injure eye tissue. Exposure to high concentration of vapor may cause pupillary dilation or pupillary constriction, and impaired pupillary reaction.
Inhalation	Irritating to respiratory system. May cause nausea, vomiting. May cause bronchospasms. May cause bronchitis. May cause chemical pneumonitis. It may cause pulmonary edema. Inhalation of high concentrations of vapors may cause dizziness or suffocation. Inhalation of high concentrations of vapor may cause anesthetic effects. It may affect behavior/central nervous system (excitation and wakefulness followed by central nervous system depression - headache, irritability, nervousness, insomnia, ataxia, seizures, tremors, hallucinations, euphoria, memory, loss, somnolence, fatigue, sedation, general anesthetic . May affect cardiovascular system (bradycardia, tachycardia, cardiac arrhythmias). May affect the brain. It may affect the cardiovascular system (hypotension, cardiac arrhythmias, cardiac arrest). May affect the kidneys. It may affect the blood (changes in white blood cell count, changes in other cell count). It may affect the bone marrow (changes in bone marrow).
Ingestion	Harmful if swallowed. Aspiration hazard if swallowed. Aspiration into the lungs can cause chemical pneumonitis. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, diarrhea. May cause abdominal pain. May affect the cardiovascular system (hypertension, increase in pulse rate, arrhythmias). It may affect the brain. May affect behavior/central nervous system (muscle contraction or spasticity). May affect behavior/central nervous system (ataxia). May affect behavior/central nervous system (convulsions). May affect respiration (acute pulmonary edema). May affect blood (changes in serum composition).
Aspiration hazard	May be fatal if swallowed and enters airways.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Prolonged or repeated inhalation may cause nausea, vomiting, abdominal pain, loss of appetite, and weight loss. Prolonged or repeated inhalation may affect respiration (respiratory failure). Prolonged or repeated inhalation may cause central nervous system effects. Prolonged or repeated ingestion or inhalation may affect the brain (degenerative changes). Prolonged or repeated inhalation may affect the peripheral nervous system (weakness, peripheral neuropathy with paresthesia - a tingling, pricking, or numbness of the skin (known as the feeling of "pins and needles) generally of the hands and feet (extremities)). Prolonged or repeated inhalation may cause decreased visual acuity, impaired color vision, optic atrophy, blindness, and ototoxicity. Prolonged or repeated inhalation may affect the cardiovascular system (dysrhythmias, tachycardia, cardiomyopathy). Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the adrenal gland. Prolonged or repeated inhalation may affect the blood (pigmented or nucleated red blood cells). Prolonged or repeated inhalation may cause metabolic acidosis, hypokalemia. Prolonged or repeated inhalation may cause rhabdomyolysis, a breakdown of muscle fibers resulting in the release of muscle fiber contents (myoglobin) into the bloodstream. This may be harmful to the kidneys and frequently result in kidney damage. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may affect the blood (changes in serum composition). Prolonged or repeated ingestion may affect the spleen. Prolonged or repeated ingestion may affect the adrenal gland. Prolonged or repeated ingestion may affect the thymus gland. Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated inhalation may affect the blood (changes in red blood cell count). Prolonged or repeated ingestion may affect hearing. Prolonged or repeated ingestion may cause loss of appetite. Prolonged or repeated ingestion may cause weight loss.

Sensitization: No information available

Mutagenic Effects: May affect genetic material
Experiments with bacteria and/or yeast have shown mutagenic effects

Carcinogenic effects: Not classifiable as to its carcinogenicity to humans. Not classifiable as a human carcinogen.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Toluene	Group 3 - Monograph 71 [1999] Monograph 47 [1989]	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: May cause adverse developmental effects
May cause harm to the unborn child
Experiments have shown reproductive toxicity effects on laboratory animals
An association between increased risk of spontaneous abortion and occupational exposure to Toluene at least three times a week in early pregnancy was observed in a case-control study of 206 spontaneous abortions among laboratory workers
Chronic abuse of toluene during pregnancy can result in miscarriages

Teratogenic Effects: No information available
 May cause birth defects (teratogenic effects)
 Showed teratogenic effects in animal experiments
 Microcephaly, central nervous system dysfunction, cerebellar dysfunction, growth deficiency, developmental delay, and craniofacial anomalies, similar in some regards to those seen in fetal alcohol syndrome, have been described in children born of women who had abused toluene during their pregnancies

Specific Target Organ Toxicity

STOT - single exposure STOT - single exposure. central nervous system.
STOT - repeated exposure No information available
Target Organs: Liver. Kidneys. Skin. Brain. Central nervous system. Peripheral nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Toluene - 108-88-3

Freshwater Algae Data: 12.5 mg/L EC50 Pseudokirchneriella subcapitata 72 h
 433 mg/L EC50 Pseudokirchneriella subcapitata 96 h

Freshwater Fish Species Data: 11.0 - 15.0 mg/L LC50 Lepomis macrochirus 96 h static 1
 14.1 - 17.16 mg/L LC50 Oncorhynchus mykiss 96 h static 1
 15.22 - 19.05 mg/L LC50 Pimephales promelas 96 h flow-through 1
 5.89 - 7.81 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1
 50.87 - 70.34 mg/L LC50 Poecilia reticulata 96 h static 1
 12.6 mg/L LC50 Pimephales promelas 96 h static 1
 28.2 mg/L LC50 Poecilia reticulata 96 h semi-static 1
 5.8 mg/L LC50 Oncorhynchus mykiss 96 h semi-static 1
 54 mg/L LC50 Oryzias latipes 96 h static 1

Water Flea Data: 5.46 - 9.83 mg/L EC50 Daphnia magna 48 h
 11.5 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Toluene	None	None	None	U220

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1294
Proper Shipping Name:	Toluene
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
ERG No:	130
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Symbol(s):	R4

TDG (Canada)

UN-No:	UN1294
Proper Shipping Name:	Toluene
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
Description:	No information available

ADR

UN-No:	UN1294
Proper Shipping Name:	Toluene
Hazard Class:	3
Packing Group:	II
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEFIC Tremcard No:	No information available

IMO / IMDG

UN-No:	UN1294
Proper Shipping Name:	Toluene
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	II
Description:	No information available
IMDG Page:	No information available
Marine Pollutant	No information available
EMS:	F-E
MFAG:	No information available
Maximum Quantity:	No information available

RID

UN-No:	UN1294
Proper Shipping Name:	Toluene
Hazard Class:	3
Subsidiary Risk:	3
Packing Group:	II
Classification Code:	No information available
Description:	No information available

ICAO

UN-No:	UN1294
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14. TRANSPORT INFORMATION

Proper Shipping Name: Toluene
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
Description: No information available

IATA

UN-No: UN1294
Proper Shipping Name: Toluene
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 3L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Toluene</i>	Present	Present KE-33936	Present	Present (3)-2	Present	Present	Present 203-625-9

U.S. Regulations

Toluene

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 1866
New Jersey (EHS) List: 1866 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Michigan - Critical Materials List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
1000 lb RQ
1 lb RQ
Louisiana Reportable Quantity List for Pollutants: 1000lbfinal RQ
454kgfinal RQ
California Directors List of Hazardous Substances: Present

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

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Toluene</i>	Not Listed	developmental toxicity	Not Listed	female reproductive toxicity

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>Toluene</i>	1000 lb final RQ 454 kg final RQ	None	None	None	1.0 % de minimis concentration

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Toluene	Not Applicable	10/04/1982 10/04/1992

Canada

WHMIS hazard class:

B2 Flammable liquid
D2A Very toxic materials
D2B Toxic materials

Toluene

B2 D2A D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Toluene	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Toluene	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Toluene	Not listed	Not listed

EU Classification

R-phrases

R11 - Highly flammable.
R38 - Irritating to skin.
R63 - Possible risk of harm to the unborn child.
R65 - Also harmful: may cause lung damage if swallowed
R67 - Vapors may cause drowsiness and dizziness.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

S -phrases

S 2 - Keep out of the reach of children.
S46 - If swallowed, seek medical advice immediately and show this container or label.
S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
S36/37 - Wear suitable protective clothing and gloves.

Components	Classification	Concentration Limits:	Safety Phrases
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Toluene	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67	No information	S2 S36/37 S46 S62
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The preparation is classified as dangerous in accordance with Directive 1999/45/EC

Contains: Toluene

Indication of danger:

F - Highly flammable.

Xn - Harmful.

Xi - Irritant.

Xn



Xi



F



16. OTHER INFORMATION

Preparation Date: 01/01/2019

Revision Date: N/A

Prepared by: -

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. DSI Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Dawn Scientific Inc assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet