## SAFETY DATA SHEET

Product Number 821

### Section 1. Identification

GHS product identifier	: Toluene
Chemical name	: Toluene
Synonyms	: Benzene, methyl-;High-purity Toluene
Code	:
MSDS #	
Supplier's details	: Sunnyside Corporation 225 Carpenter Ave Wheeling, IL 60090 sscontact@sunnysidecorp.com
Emergency telephone number	: Technical Contact: (847) 541-5700 CHEMTREC Emergency: (800) 424-9300 (United States Only)

### Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	<ul> <li>FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION [Unborn child] - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1</li> </ul>
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	<ul> <li>Highly flammable liquid and vapor. Causes serious eye irritation. Causes skin irritation. Suspected of damaging the unborn child. May be fatal if swallowed and enters airways. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.</li> </ul>
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. Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling.

### Section 2. Hazards identification

Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. 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 attention.
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
Disposal	<ul> <li>Dispose of contents and container in accordance with all local, regional, national and international regulations.</li> </ul>
Hazards not otherwise classified	: None known.

### Section 3. Composition/information on ingredients

Substance/mixture	: Substance
Chemical name	: Toluene
Other means of identification	: Benzene, methyl-;High-purity Toluene; Petroleum hydrocarbon solvent; CITGO® Material Code: 07307

#### **CAS number/other identifiers**

CAS number	: 108-88-3

Ingredient name	%	CAS number
Toluene	99 - 100	108-88-3
* = Various ** = Mixture *** = Proprietary		

Any concentration shown as a range is to protect confidentiality or is due to process variation.

#### Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

Description of necessary first aid measures		
Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.	
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that gas or vapor is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.	
Ingestion	: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	

### Section 4. First aid measures

Most important symptoms/	
Potential acute health effe	<u>ets</u>
Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Breathing high concentrations can cause irregular heartbeats which can be fatal.
Skin contact	: Causes skin irritation.
Ingestion	: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.
<u>Over-exposure signs/sym</u>	<u>otoms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concentrations can cause irregular heartbeats which can be fatal.
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: Adverse symptoms may include the following: nausea or vomiting
Indication of immediate me	dical attention and special treatment needed, if necessary
Notes to physician	: This material (or a component) may sensitize the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrthymias in individuals exposed to this material. If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.
Specific treatments	: Treat symptomatically and supportively.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that gas or vapor is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: Highly flammable liquid and vapor. In a fire or if he and the container may burst, with the risk of a subs heavier than air and will spread along the ground. Y confined areas or travel a considerable distance to Runoff to sewer may create fire or explosion hazard material must be contained and prevented from bein sewer or drain.	equent explosion. The vapor/gas is Vapors may accumulate in low or a source of ignition and flash back. d. Fire water contaminated with this
Extinguishing media Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.	
Date of issue/Date of revision	: 1/30/2015.	Version : 4 3/12

### Section 5. Fire-fighting measures

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Unsuitable extinguishing media	: Do not use water jet.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
Methods and materials for co	ntainment and cleaning up
Small spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal

### Section 7. Handling and storage

#### Precautions for safe handling

or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release the environment. Use only with adequate ventilation. Wear appropriate respirator ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative ma from a compatible material, kept tightly closed when not in use. Store and use awa from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-spar	Protective measures	adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away
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### Section 7. Handling and storage

retain product residue and can be hazardous. Do not reuse container.
: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Bulk Storage Conditions: Maintain all storage tanks in accordance with applicable regulations. Use necessary controls to monitor tank inventories. Inspect all storage tanks on a periodic basis. Test tanks and associated piping for tightness. Maintain the automatic leak detection devices to assure proper working condition.

### Section 8. Exposure controls/personal protection

#### **Control parameters**

**Occupational exposure limits** 

Ingredient name	Exposure limits
Toluene	OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.
	ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours.

Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, vapor controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection measure	<u>s</u>
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. chemical splash goggles. If inhalation hazards exist, a full-face respirator may be required instead.
Skin protection	

### Section 8. Exposure controls/personal protection

Hand protection	: Chemical-resistant gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

### Section 9. Physical and chemical properties

Auto-ignition temperature Viscosity	: 480°C (896°F) : Kinematic (room temperature): <0.03 cm <sup>2</sup> /s (<3 cSt)
Solubility	: Very slightly soluble in the following materials: cold water.
Gravity, °API	: Estimated 31 @ 60 F
Density lbs/gal	: 7.26 lbs/gal
Relative density	: 0.87
Vapor density	: 3.1 [Air = 1]
Vapor pressure	: 3.2 kPa (24 mm Hg) [room temperature]
Lower and upper explosive (flammable) limits	: Lower: 1.1% Upper: 7.1%
Evaporation rate	: 2 (butyl acetate = 1)
Flash point	: Closed cup: 4°C (39.2°F) [Tagliabue.]
Boiling point/boiling range	: 109°C (228.2°F)
Melting point	: -95°C (-139°F)
рН	: Not available.
Odor	: Characteristic.
Color	: Colorless.
Physical state	: Liquid. [Watery liquid.]

### Section 10. Stability and reactivity

Reactivity		Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials		Reactive or incompatible with the following materials: oxidizing materials

### Section 10. Stability and reactivity

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Section 11. Toxicological information

#### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor LD50 Dermal LD50 Oral TDLo Oral	Rabbit Rat - Male	>20 mg/l 12267 mg/kg 5580 mg/kg 1000 mg/kg	4 hours - - -

Conclusion/Summary

: **Toluene**: Deliberate inhalation of toluene at high concentrations (e.g., glue sniffing and solvent abuse) can cause CNS depression, cardiac arrhythmias and death.

#### Irritation/Corrosion

Product/ingredient name	Result		Species	Score	Exposure	Observation
Toluene	Eyes - Milo	d irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Milo	d irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild	irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild	irritant	Rabbit	-	435 milligrams	-
	Skin - Moo	lerate irritar	nt Rabbit	-	500 milligrams	-
Skin	: No additi	onal inform	ation.			
Eyes		onal inform				
Respiratory	: No additi	onal inform	ation.			
<u>Sensitization</u>						
Skin			itizer to skin.			
Respiratory <u>Mutagenicity</u>	: Toluene:	Non-sensi	itizer to lungs.			
Conclusion/Summary	: No additi	onal inform	ation.			
Cominemeniaity						
Carcinogenicity	: No additi	onal inform	ation			
Conclusion/Summary <u>Classification</u>	. NO auulu		allon.			
Product/ingredient name	OSHA	IARC	NTP			
Toluene	-	3	-			
Reproductive toxicity						
Conclusion/Summary	adverse e long-term changes indicate t indicate s significar of persor including findings i	effects on the effects on the exposure in some go oluene is a some changed at effects or a abusing the birth defects on the object of the effects of the object of the effects of the object of the effect of the object of the ob	lies of persons abus he fetus including b may be related to s onadotropic hormon reproductive hazar ges in reproductive n mating performan toluene suggest iso ts. Findings in labo all increases in mino ys following very hig	birth defects. S small increase les. However, organs follow ce or reprodu- plated incidence pratory animal or skeletal and	Several studies of s in spontaneous a , the weight of evic Studies in laborat ing high levels of e ction were observe ces of adverse effe s were largely neg d visceral malformatic	workers suggest abortions and lence does not cory animals exposure, but no ed. Case studies ects on the fetus ative. Positive
Teratogenicity						
Conclusion/Summary	: No additi	onal inform	ation.			
Date of issue/Date of revision	: 1/30/201	5.			Version	:4 7/12

### Section 11. Toxicological information

# Specific target organ toxicity (single exposure)

Specific target organ toxic				
Name		Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Narcotic effects	
Specific target organ toxic	<u>city (repeated exposure)</u>	·	·	
Name	Category	Route of exposure	Target organs	
Toluene Category			Not determined	Not determined
Aspiration hazard				
Name			Result	
Toluene			ASPIRATION HAZARI	D - Category 1
nformation on the likely outes of exposure	: Routes of entry anticipation	ated: Dermal, Inha	alation.	
Potential acute health effect	<u>:ts</u>			
Eye contact	: Causes serious eye irr	itation.		
Inhalation	<ul> <li>Can cause central nerv dizziness. Breathing h fatal.</li> </ul>		b) depression. May caus s can cause irregular heat	
Skin contact	: Causes skin irritation.			
Ingestion	: Can cause central nerventers airways. Irritatir		<li>b) depression. May be fat the stomach.</li>	atal if swallowed and
Symptoms related to the pl	hysical, chemical and toxic	ological character	eristics	
Eye contact	: Adverse symptoms ma	windude the felle	wina:	
Lye contact	pain or irritation watering redness		wing.	
Inhalation	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness</li> </ul>	ay include the follo	-	ich can be fatal.
	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness</li> </ul>	ay include the follo	wing: e irregular heartbeats wh	ich can be fatal.
Inhalation Skin contact	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms manairritation</li> </ul>	ay include the follo trations can cause ay include the follo	wing: e irregular heartbeats wh wing:	ich can be fatal.
Inhalation Skin contact Ingestion	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms main nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms main irritation redness</li> <li>Adverse symptoms main ausea or vomiting</li> </ul>	ay include the follo trations can cause ay include the follo	wing: e irregular heartbeats wh wing:	ich can be fatal.
Inhalation Skin contact Ingestion	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms main nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms main irritation redness</li> <li>Adverse symptoms main ausea or vomiting</li> </ul>	ay include the follo trations can cause ay include the follo ay include the follo	wing: e irregular heartbeats wh wing: wing:	
Inhalation Skin contact Ingestion <u>Potential chronic health e</u>	pain or irritation watering redness : Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent : Adverse symptoms manirritation redness : Adverse symptoms manausea or vomiting	ay include the follo trations can cause ay include the follo ay include the follo organs through p	wing: e irregular heartbeats wh wing: wing:	
Inhalation Skin contact Ingestion <u>Potential chronic health e</u> General	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms manausea or vomiting</li> <li>Adverse symptoms manausea or vomiting</li> </ul>	ay include the follo trations can cause ay include the follo ay include the follo organs through pu ffects or critical ha	wing: e irregular heartbeats wh wing: wing: rolonged or repeated exp azards.	
Inhalation Skin contact Ingestion <u>Potential chronic health e</u> General Carcinogenicity	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms manausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms manausea or vomiting</li> </ul>	ay include the follo trations can cause ay include the follo ay include the follo organs through pu ffects or critical ha ffects or critical ha	wing: e irregular heartbeats wh wing: wing: rolonged or repeated exp azards. azards.	
Inhalation Skin contact Ingestion <u>Potential chronic health er</u> General Carcinogenicity Mutagenicity	<ul> <li>pain or irritation watering redness</li> <li>Adverse symptoms main nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness Breathing high concent</li> <li>Adverse symptoms main irritation redness</li> <li>Adverse symptoms main nausea or vomiting</li> </ul>	ay include the follo trations can cause ay include the follo ay include the follo organs through pu ffects or critical ha ffects or critical ha g the unborn child	wing: e irregular heartbeats wh wing: wing: rolonged or repeated exp azards. azards.	

### Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 433 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 500000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Conclusion/Summary	Not available.	·	•

#### Persistence and degradability

<b>Conclusion/Summary</b>	: Toluene: Rapidly biodegradable in aerobic conditions.			
Product/ingredient name	Aquatic half-life Photolysis Biodegradability			
Toluene	-	-	Readily	

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Toluene	2.73	8.3	low

<u>Mobility in soil</u>	
Soil/water partition coefficient (K <sub>oc</sub> )	: Not available.

#### Other adverse effects

: No known significant effects or critical hazards.

### Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

#### RCRA classification : D001, D018

#### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #		Reference number
Toluene	108-88-3	Listed	U220

### Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1294	UN1294	UN1294
UN proper shipping name	UN1294, Toluene, 3, PG II RQ (Toluene)	UN1294, Toluene, 3, PG II RQ (Toluene)	UN1294, Toluene, 3, PG II RQ (Toluene)
Transport hazard class(es)	3	3	3
Packing group	II	II	II
Environmental hazards	No.	Yes.	No.
Additional information	<b>Reportable quantity</b> 1000 lbs / 454 kg [138.33 gal / 523.64 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.		

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Section 15. Regulatory information

U.S. Federal regulations	: United States inventory (TSCA 8b): All components are listed or exempted.
	Clean Water Act (CWA) 307: Toluene
	Clean Water Act (CWA) 311: Toluene
	This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
SARA 302/304	
Composition/information	on ingredients
SARA 304 RQ	: Not applicable.
<u>SARA 311/312</u>	
Classification	: Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Date of issue/Date of revision	Date	of	issue/	Date	of	revision	
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### Section 15. Regulatory information

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Toluene	Yes.	No.	No.	Yes.	Yes.

#### SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Toluene	108-88-3	99 - 100
Supplier notification	Toluene	108-88-3	99 - 100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

#### State regulations

Massachusetts	he following components are listed: TOLUENE	
New York	he following components are listed: Toluene	
New Jersey	he following components are listed: TOLUENE; BENZENE, N	/IETHYL-
Pennsylvania	he following components are listed: BENZENE, METHYL-	

#### California Prop. 65

**WARNING:** This product contains less than 0.1% of a chemical known to the State of California to cause cancer. **WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Toluene	99 - 100	No.	Yes.	No.	7000 μg/day (ingestion)
Ethylbenzene	<0.1	Yes.	No.	41 μg/day (ingestion) 54 μg/day (inhalation)	No.
Benzene	<0.01	Yes.	Yes.	6.4 μg/day (ingestion) 13 μg/day (inhalation)	24 μg/day (ingestion) 49 μg/day (inhalation)
Cumene	<0.001	Yes.	No.	No.	No.
Naphthalene	<0.0001	Yes.	No.	Yes.	No.

#### **International regulations**

International lists	<ul> <li>Australia inventory (AICS): All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. Japan inventory: All components are listed or exempted. Korea inventory: All components are listed or exempted. Malaysia Inventory (EHS Register): All components are listed or exempted. New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. Philippines inventory (PICCS): All components are listed or exempted. Taiwan inventory (CSNN): All components are listed or exempted.</li> </ul>
Canada inventory	: All components are listed or exempted.
EU Inventory	: All components are listed or exempted.
WHMIS (Canada)	<ul> <li>Class B-2: Flammable liquid</li> <li>Class D-2A: Material causing other toxic effects (Very toxic).</li> <li>Class D-2B: Material causing other toxic effects (Toxic).</li> </ul>

Histow

### Section 16. Other information

#### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

<u>History</u>	
Date of issue/Date of revision	: 1/30/2015.
Key to abbreviations	<ul> <li>ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations</li> </ul>

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12/12