

**1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND COMPANY/ UNDERTAKING**

**Material Name** : **Toluene**  
**Product Code** : Q9131, Q9138, Q9250, Q9300, Q9308, T1402, X211H  
**CAS-No.** : 108-88-3

**Supplier** : Chemisol Inc.  
 3/F Johnson Bldg. #5 D. Muñoz St.  
 Tandang Sora, Quezon City  
 Philippines

**Telephone** : (632) 938 5388  
**Fax** : (632) 938 3818

**Emergency Telephone Number** : (632) 938 5388

**Recommended use of the chemical and restrictions on use**  
**Recommended use** :

**2. HAZARDS IDENTIFICATION**

**GHS Classification**

Flammable liquids	:	Category 2
Skin irritation	:	Category 2
Reproductive toxicity	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Narcotic effects)
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2 (Central nervous system (CNS).)
Aspiration hazard	:	Category 1
Acute aquatic toxicity	:	Category 2
Chronic aquatic toxicity	:	Category 3

**GHS Label Statements**

**Symbol**



**Signal Words**

: Danger

**GHS Hazards Statements**

: PHYSICAL HAZARDS:  
 H225 Highly flammable liquid and vapour.

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: **HEALTH HAZARDS:**  
H315 Causes skin irritation.  
H361 Suspected of damaging fertility or the unborn child.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.  
H304 May be fatal if swallowed and enters airways.

: **ENVIRONMENTAL HAZARDS:**  
H401 Toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

**GHS Precautionary statements**  
**Prevention**

: 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 dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash hands thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P273 Avoid release to the environment.

**Response**

CENTER/doctor.

: P301 + P310 IF SWALLOWED: Immediately call a POISON  
P331 Do NOT induce vomiting.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P370+P378 In case of fire: Use appropriate media for extinction.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor if you feel unwell.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage**

: P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P235 Keep cool.  
P405 Store locked up

**Disposal**

: P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

**Other Hazards which do not result in classification**

May form flammable/explosive vapour-air mixture. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic

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charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.:

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

**Substance/Mixture** : Substance

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (%)
toluene	108-88-3	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Repr. 2; H361 STOT SE 3; H336 STOT RE2; H373 Skin Irrit. 2; H315 Aquatic Acute 2; H401 Aquatic chronic 3; H412	>=99.5 - <=100

### 4. FIRST AID MEASURES

**General advice** : DO NOT DELAY  
: Keep victim calm. Obtain medical treatment immediately.

**If inhaled** : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

**In case of skin contact** : Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

**In case of eye contact** : Flush eye with copious quantities of water.  
If persistent irritation occurs, obtain medical attention.

**If swallowed** : If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspirations. Give nothing by mouth. Do NOT induce vomiting.

**Most important symptoms and effects, both acute and delayed**

: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.  
Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.  
If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.  
The onset of respiratory symptoms may be delayed for several hours after exposure.  
Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and

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loss of coordination. Continued inhalation may result in unconsciousness and death.  
Auditory system effects may include temporary hearing loss and/or ringing in the ears.  
Visual system disturbances may be evidenced by decreases in the ability to discriminate between colours.

**Protection of first-aiders** : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

**Notes to physician** : Potential for chemical pneumonitis.  
Potential for cardiac sensitisation, particularly in abuse situations. Hypoxia or negative inotropes may enhance these effects. Consider: oxygen therapy.  
Call a doctor or poison control center for guidance.

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## 5. FIRE FIGHTING MEASURES

**Suitable extinguishing Media** : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable extinguishing Media** : Do not use water in a jet.

**Specific hazards during Firefighting** : Clear fire area of all non-emergency personnel.  
Hazardous combustion products may include:  
A complex mixture of airborne solid and liquid particulates and gases (smoke).  
Carbon monoxide.  
Unidentified organic and inorganic compounds.  
Flammable vapours may be present even at temperatures below the flash point.  
The vapour is heavier than air, spreads along the ground and distant ignition is possible.  
Will float and can be reignited on surface water.

**Specific extinguishing methods** : Standard procedure for chemical fires.  
Keep adjacent containers cool by spraying with water.

**Special protective Equipment for firefighters** : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, Protective equipment and emergency procedures** : Observe all relevant local and international regulations.  
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

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Local authorities should be advised if significant spillages cannot be contained.  
Avoid contact with skin, eyes and clothing.  
Isolate hazard area and deny entry to unnecessary or unprotected personnel.  
Do not breathe fumes, vapour.  
Do not operate electrical equipment.

**Environmental  
Precautions**

: Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Monitor area with combustible gas indicator.

**Methods and materials  
for containment and  
cleaning up**

: For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Ventilate contaminated area thoroughly.

If contamination of site occurs remediation may require specialist advice.

**Additional advice**

: For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet.  
For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

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**7. HANDLING STORAGE**

**General Precautions**

: Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet.  
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.  
Ensure that all local regulations regarding handling and storage facilities are followed.

**Advice on safe handling**

: Avoid inhaling vapour and/or mists.  
Avoid contact with skin, eyes and clothing.  
Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.  
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.

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Bulk storage tanks should be diked (bunded).  
When using do not eat or drink.

The vapour is heavier than air, spreads along the ground and distant ignition is possible.

**Avoidance of contact** : Strong oxidising agents

**Product Transfer**

: Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/s until fill pipe submerged to twice its diameter, then  $\leq 7$  m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

Refer to guidance under Handling section.

**Storage**

**Conditions for safe storage**

: Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

**Other data**

: Storage Temperature: Ambient.

Bulk storage tanks should be diked (bunded).

Locate tanks away from heat and other sources of ignition.

Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions.

Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat.

Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment.

Electrostatic charges will be generated during pumping.

Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.

The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

**Packaging material**

: Suitable material: For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.

**Unsuitable material**

: Avoid prolonged contact with natural, butyl or nitrile rubbers.

**Container Advice**

: Do not cut, drill, grind, weld or perform similar operations on or near containers.

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**Specific use(s)** : Not applicable

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exp	Control parameters/ Permissible concentration	Basis
toluene	108-88-3	PEL (long term)	50 ppm 188 mg/m <sup>3</sup>	
		TWA	20 ppm	ACGIH
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2

### Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
toluene	108-88-3	toluene	Blood	Prior to last shift of workweek	0.05 mg/l	SG BTLV

### Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods  
<http://www.cdc.gov/niosh/>

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods  
<http://www.osha.gov/>

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances  
<http://www.hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany  
<http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité, (INRS), France <http://www.inrs.fr/accueil>

### Engineering measures

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

Firewater monitors and deluge systems are recommended.

Eye washes and showers for emergency use.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

### General Information

: Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

### Personal protective equipment

#### Protective measures

: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

### Respiratory protection

: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.

Check with respiratory protective equipment suppliers.

Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

If air-filtering respirators are suitable for conditions of use:

Select a filter suitable for organic gases and vapours [Type A boiling point >65°C (149°F)].

### Hand protection

#### Remarks

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care.



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Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

**Eye protection** : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

**Skin and body Protection** : Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.  
Wear antistatic and flame retardant clothing, if a local risk assessment deems it so

**Thermal hazards** : Not applicable

**Hygiene measures** : Wash hands before eating, drinking, smoking and using the toilet.  
Launder contaminated clothing before re-use.  
Do not ingest. If swallowed then seek immediate medical assistance.

**Environmental exposure**  
**Controls General advice** : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. Information on accidental release measures are to be found in section 6.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Liquid  
**Colour** : colourless  
**Odour** : aromatic  
**Odour Threshold** : 1.74 ppm  
**pH** : Not applicable  
**Melting / freezing point** : Typical -95°C / -139°F  
**Boiling point/boiling range** : Typical 110-111°C / 230-232°F  
**Flash point** : 4°C / 39°F  
**Upper explosion limit** : 7.1% (V)  
**Lower explosion limit** : 1.2% (V)  
**Vapour pressure** : Typical 3.5 kPa (20°C / 68°F)  
**Relative vapour density** : 3.1  
**Relative density** : 0.87  
**Density** : Typical 871 kg/m<sup>3</sup> (15°C / 59°F)  
**Solubility (ies)**  
**Water solubility** : 0.515 kg/m<sup>3</sup>  
**Partition coefficient** : log Pow: 2.65

**Auto-ignition temperature** : > 480°C / 896°F  
**Decomposition Temperature** : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

**Viscosity, dynamic** : Data not available  
**Viscosity, kinematic** : 0.63 mm<sup>2</sup>/s (25°C / 77°F)

**Explosive properties** : Not applicable  
**Oxidizing properties** : Data not available

**Conductivity:** Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semiconductive, the precautions are the same., A number of factors, for

example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid

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## 10. STABILITY AND REACTIVITY

**Reactivity** : The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph

**Chemical stability** : No hazardous reaction is expected when handled and stored according to provisions Stable under normal conditions of use.

**Possibility of hazardous Reactions** : Reacts with strong oxidising agents

**Conditions to avoid** : Avoid heat, sparks, open flames and other ignition sources.  
In certain circumstances product can ignite due to static electricity.

**Incompatible materials** : Strong oxidising agents.

**Hazardous decomposition Products** : Hazardous decomposition products are not expected to form during normal storage.  
Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

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## 11. TOXICOLOGICAL INFORMATION

**Basis for assessment** : Information given is based on product data.

**Information on likely routes of Exposure** : Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.

**Acute toxicity**

**Product**

**Acute oral toxicity** : LD50 : > 5,000 mg/kg  
Remarks: Low toxicity:

**Acute inhalation toxicity** : Remarks: Low toxicity by inhalation.  
High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea.

**Acute dermal toxicity** : LD50 : > 5,000 mg/kg  
Remarks: Low toxicity:

**Skin corrosion/irritation**

**Product**

: Remarks: Causes skin irritation.

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**Serious eye damage/  
eye irritation  
Product**

: Remarks: Slightly irritating to the eye.

**Respiratory or skin  
sensitization  
Product**

: Remarks: Not expected to be a sensitiser.

**Germ cell mutagenicity  
Product**

: Remarks: Not mutagenic.

**Carcinogenicity  
Product**

: Remarks: Not expected to be carcinogenic.

<b>Material</b>	<b>GHS/CLP Carcinogenicity Classification</b>
toluene	No carcinogenicity classification

<b>Material</b>	<b>Other Carcinogenicity Classification</b>
toluene	IARC: Group 3: Not classifiable as to its carcinogenicity to humans

**Reproductive toxicity  
Product**

: Remarks: Suspected of damaging the unborn child. Does not impair fertility.

**STOT - single exposure  
Product**

: Remarks: Vapours may cause drowsiness and dizziness., Inhalation of vapours or mists may cause irritation to the respiratory system.

**STOT - repeated exposure  
Product**

: Remarks: May cause damage to central nervous system, respiratory system, visual system, and auditory system through prolonged or repeated exposure., Effects were seen at high doses only., Visual system: may cause decreased color perception. , These subtle changes have not been found to lead to functional colour vision deficits., Auditory system: prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. , Solvent abuse and noise interaction in the work environment may cause hearing loss.

**Aspiration toxicity  
Product**

: Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

**Further information  
Product**

: Remarks: Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest., Abuse of vapours has been associated with organ damage and death., Classifications by other authorities under varying regulatory frameworks may exist.

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**12. ECOLOGICAL INFORMATION**

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**Basis for assessment** : Ecotoxocological data are based on product testing.

**Ecotoxicity**

**Product :**

**Toxicity to fish**

**(Acute toxicity)**

: LL50 : > 1 - 10 mg/l

Remarks: Toxic:

**Toxicity to crustacean**

**(Acute toxicity)**

: EL50 : > 1 - 10 mg/l

Remarks: Toxic:

**Toxicity to algae/**

**aquatic plants**

**(Acute toxicity)**

: EL50 : > 100 mg/l

Remarks: Practically non toxic:

**Toxicity to fish**

**(Chronic toxicity)**

: Remarks: NOEC/NOEL > 1.0 - <=10 mg/l (based on test data)

**Toxicity to crustacean**

**(Chronic toxicity)**

: Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l

**Toxicity to microorganisms**

**(Acute toxicity)**

: Remarks: Data not available

**Persistence and degradability**

**Product**

:

**Biodegradability**

: Remarks: Readily biodegradable., Oxidises rapidly by photo-chemical reactions in air.

**Bioaccumulative potential**

**Product**

:

**Bioaccumulation**

: Remarks: Does not bioaccumulate significantly.

**Partition coefficient**

: log Pow: 2.65

**n-octanol/water**

:

**Mobility in soil**

**Product**

:

**Mobility**

: Remarks: If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater., Floats on water.

**Other adverse effects**

:

**Product**

: no data available

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**13. DISPOSAL CONSIDERATIONS**

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**Material Disposal**  
**Waste from residues**

:  
: Recover or recycle if possible.  
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.  
  
Do not dispose into the environment, in drains or in water courses  
Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.  
  
Disposal should be in accordance with applicable regional, national, and local laws and regulations.  
Local regulations may be more stringent than regional or national requirements and must be complied with.

**Container Disposal**

: Drain container thoroughly.  
After draining, vent in a safe place away from sparks and fire.  
Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.  
Send to drum recoverer or metal reclaimer.  
Comply with any local recovery or waste disposal regulations.

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**14. TRANSPORT CONSIDERATIONS**

**International Regulation**

**ADR**

UN number : 1294  
Proper shipping name : TOLUENE  
Class : 3  
Packing group : II  
Labels : 3  
Hazard Identification Number : 33  
Environmentally hazardous : no

**IATA-DGR**

UN number : 1294  
Proper shipping name : TOLUENE  
Class : 3  
Packing group : II  
Labels : 3

**IMDG-Code**

UN number : 1294  
Proper shipping name : TOLUENE  
Class : 3  
Packing group : II  
Labels : 3  
Marine pollutant : no

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**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**Pollution category** : Y  
**Ship type** : 3  
**Product name** : Toluene

**Special precautions for user**

**Remarks** : Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport

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**15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
Local Regulations

Workplace Safety and Health Act & Workplace Safety and Health (General Provision) Regulations	This product is subject to the requirements in the Act/Regulations
Misuse Drug Act	This product is subject to the requirements in the Act/Regulations
Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations	This product is subject to the requirements in the Act/Regulations
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations	This product is subject to the requirements in the Act/Regulations
Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations	This product is subject to the requirements in the Act/Regulations

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

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**16. OTHER INFORMATION**

**Full text of H-Statements**

H225 Highly flammable liquid and vapour.  
H315 Causes skin irritation.  
H361 Suspected of damaging fertility or the unborn child.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.  
H304 May be fatal if swallowed and enters airways.  
H401 Toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

**Full text of other abbreviations**

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Asp. Tox.	Aspiration hazard
Flam. Liq.	Flammable liquids
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure