

YOUNG SUN CHEMTRADE CO., LTD.

Safety Data Sheet

Toluene

Version 2.1

Effective Date 2015/08/12

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

Material Name	: Toluene
Recommended use / Restrictions of use	: Solvent. Raw material for use in the chemical industry. / Please refer to Chapter 16.
Supplier	: Young Sun Chemtrade Co., Ltd. 14F., No. 125, Sec. 2, Nanking East Road, Taipei, Taiwan
Telephone	: +886-2-25167189
Fax	: +886-2-25167187
Emergency Telephone Number	: +886-4-26390837

2. HAZARDS IDENTIFICATION

GHS Classification	: Flammable liquids, Category 2 Skin corrosion/irritation, Category 2 Toxic to reproduction, Category 2 Specific target organ toxicity - single exposure, Category 3, Narcotic effects. Specific target organ toxicity - repeated exposure, Category 2, Central nervous system (CNS). Aspiration hazard, Category 1 Acute hazards to the aquatic environment, Category 2
---------------------------	--

GHS Label Elements

Symbol(s)	: 
------------------	--

Signal Words	: Danger
---------------------	----------

GHS Hazard statements	: PHYSICAL HAZARDS: H225: Highly flammable liquid and vapor. 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 or organ systems through prolonged or repeated exposure. H304: May be fatal if swallowed and enters airways. ENVIRONMENTAL HAZARDS:
------------------------------	---

YOUNG SUN CHEMTRADE CO., LTD.

Toluene

Version 2.1

Effective Date 2015/08/12

Safety Data Sheet

H401: Toxic to aquatic life.

GHS Precautionary Statements

Prevention

- : 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.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P264: Wash hands thoroughly after handling.
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P281: Use personal protective equipment as required.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P273: Avoid release to the environment.

Response

- : P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+P378: In case of fire: Use appropriate media for extinction.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P321: Specific treatment (see details on label).
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P308+P313: IF exposed or concerned: Get medical advice/attention.
- P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P314: Get medical advice/attention if you feel unwell.
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P331: Do NOT induce vomiting.

Storage

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

Disposal:

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

Safety Data Sheet

- Other Hazards which do not result in classification** : Highly flammable.
In use, 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 charge.
If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.
Electrostatic charges may be generated during pumping.
Electrostatic discharge may cause fire.
Slightly irritating to respiratory system.
Slightly irritating to the eye.
- Aggravated Medical Condition** : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Auditory system. Central nervous system (CNS). Respiratory system. Eyes. Skin. Visual system. Kidney.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- Chemical Identity** : Benzene, methyl
CAS No. : 108-88-3
EINECS No. : 203-625-9

Classification of components according to GHS

Chemical Name	Synonyms	CAS	Hazard Class (category)	Hazard statement	Conc.
Toluene		108-88-3	Flam. Liq., 2; Repr., 2; Asp. Tox., 1; STOT RE, 2; Skin Corr., 2; STOT SE, 3; Aquatic Acute, 2;	H225;H361;H304;H373;H315; H336;H401;	100.00 %

4. FIRST AID MEASURES

- General Information** : Keep victim calm. Obtain medical treatment immediately.
The first aid measures for different exposure routes:
- Inhalation** : DO NOT DELAY. Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
- 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.
- Eye Contact** : Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest

Safety Data Sheet

Ingestion	: medical facility for additional treatment. : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3° C), shortness of breath, chest congestion or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth. Do not induce vomiting.
Notes to physician 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 vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and 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 colors.
Immediate medical attention, special treatment	: 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.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Specific Hazards	: The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water. Carbon monoxide may be evolved if incomplete combustion occurs.
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.
Protective Equipment for Firefighters	: Wear full protective clothing and self-contained breathing apparatus.
Other Advice	: Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations. Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this

YOUNG SUN CHEMTRADE CO., LTD.

Effective Date 2015/08/12

Safety Data Sheet

Material Safety Data Sheet. See Chapter 13 for information on disposal.

- Personal Precautions, Protective Equipment and Emergency Procedures** : Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas.
- Environmental Precautions** : Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) 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 vapor 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. Ventilate contaminated area thoroughly.
- Methods and Material for Containment and Cleaning Up** : 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. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, 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.
- Additional Advice** : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Vapor may form an explosive mixture with air. See Chapter 13 for information on disposal.

7. HANDLING AND STORAGE

- General Precautions** : Avoid breathing vapors or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on selection of personal protective equipment see Chapter 8 of this Material 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.
- Precautions for Safe Handling** : Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. 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-vapor mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result

Safety Data Sheet

	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 (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area.
Conditions for Safe Storage	: Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system. Bulk storage tanks should be diked (bunded). 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. The vapor is heavier than air. Beware of accumulation in pits and confined spaces. 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 vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.
Product Transfer	: Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling. Refer to guidance under Handling section.
Recommended Materials	: For containers, or container linings use mild steel, stainless steel.
Unsuitable Materials	: Natural, butyl, neoprene or nitrile rubbers.
Container Advice	: Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Other Advice	: Ensure that all local regulations regarding handling and storage facilities are followed. See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

Occupational Exposure Limits

YOUNG SUN CHEMTRADE CO., LTD.

Effective Date 2015/08/12

Safety Data Sheet

Material	Source	Type	ppm	mg/m3	Notation
Toluene	ACGIH	TWA	20 ppm		
	SG OEL	TWA	50 ppm	188 mg/m3	

Biological Exposure Index (BEI)

Material	Determinant	Sampling time	BEI	Reference
Toluene	o-Cresol in urine	End of shift	0.5 mg/l	ACGIH (2003)
	Hippuric acid in urine	End of shift	1.6 g/g creatinine	ACGIH (2003)
	toluene in Blood	Sampling time: Prior to last shift of work week.	0.02 mg/l	ACGIH BEL (01 2010)
	o-Cresol, with hydrolysis in Creatinine in urine	Sampling time: End of shift.	0.3 mg/g	ACGIH BEL (01 2010)
	toluene in Urine	Sampling time: End of shift.	0.03 mg/l	ACGIH BEL (01 2010)

Appropriate Engineering Controls

: 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.

Individual Protection Measures

Respiratory Protection

: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers. 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 suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors [boiling point >65 °C (149 °F)] meeting EN14387. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739, AS/NZS:2161) made from the following materials may provide suitable chemical protection: Longer term protection: Viton. Incidental contact/Splash protection: Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. 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.

Safety Data Sheet

Eye Protection	: Chemical splash goggles (chemical monogoggles).
Body protection	: Chemical resistant gloves/gauntlets. Where risk of splashing or in spillage clean up, use chemical resistant one-piece overall with integral hood. Wear antistatic and flame retardant clothing.
Thermal hazards	: Not applicable
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. 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/nmam/nmammenu.html . Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/dts/sltc/methods/index.html Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances, http://www.hse.gov.uk/pubns/mdhs/index.htm Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany. http://www.dguv.de/ifa/en/gestis/analytical_methods/index.jsp L'Institut National de Recherche et de Sécurité, (INRS), France http://www.inrs.fr/accueil/risques/chimiques/controle-exposition.html
Environmental Exposure Controls	: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Colorless Liquid.
Odor	: Aromatic
Odor threshold	: 1.74 ppm
pH	: Not applicable
Initial Boiling point and boiling range	: Typical 110 - 111 °C / 230 - 232 °F
Melting / freezing point	: Typical -95 °C / -139 °F
Flash point	: 4 °C / 39 °F (Abel)
Explosion / Flammability limits in air	: 1.2 - 7.1 % (V)
Ignition temperature	: Data not available.
Auto-ignition temperature	: 480 - 536 °C / 896 - 997 °F (ASTM E-659)
Flammability (solid, gas)	: Yes, in certain circumstances product can ignite due to static electricity.
Vapor pressure	: Typical 1 kPa at 0 °C / 32 °F Typical 3 - 3.5 kPa at 20 °C / 68 °F Typical 12 kPa at 50 °C / 122 °F
Relative Density	: Data not available.
Density	: Typical 871 kg/m ³ at 15 °C / 59 °F

Safety Data Sheet

Water solubility	: 0.515 kg/m ³
Solubility in other solvents	: Soluble in hydrocarbons and acetone
n-octanol/water partition coefficient (log Pow)	: 2.65
Decomposition temperature	: Note:: Stable under normal conditions of use., Reacts violently with strong oxidising agents.
Dynamic viscosity	: Data not available.
Kinematic viscosity	: 0.63 mm ² /s at 25 °C / 77 °F
Vapor density (air=1)	: 3.1
Electrical 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 semi-conductive, 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.
Dielectric constant	: Typical 2.4
Evaporation rate (nBuAc=1)	: 6.1 (DIN 53170, di-ethyl ether=1) 2 (ASTM D 3539, nBuAc=1)
Surface tension	: Typical 28.5 mN/m at 20 °C / 68 °F (ASTM D-971)
Molecular weight	: 92 g/mol
Decomposition temperature	: Data not available.

10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions of use. Reacts violently with strong oxidising agents.
Conditions to Avoid	: Avoid heat, sparks, open flames and other ignition sources. Prevent vapour accumulation.
Incompatible Materials	: Strong oxidising agents.
Hazardous Decomposition Products	: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Possibility of Hazardous Reactions	: Stable under normal conditions of use.
Sensitivity to Static Discharge	: Yes, in certain circumstances product can ignite due to static electricity.

11. TOXICOLOGICAL INFORMATION**Information on Toxicological effects**

Basis for Assessment	: Information given is based on product data.
Likely Routes of Exposure	: Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.
Acute Toxicity	
Acute Oral Toxicity	: Low toxicity: LD50 >5000 mg/kg

YOUNG SUN CHEMTRADE CO., LTD.**Toluene**

Version 2.1

Effective Date 2015/08/12

Safety Data Sheet

Acute Dermal Toxicity	: Low toxicity: LD50 >5000 mg/kg
Acute Inhalation Toxicity	: Low toxicity if inhaled. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea.
Skin Corrosion/Irritation	: Causes skin irritation.
Serious Eye Damage/Irritation	: Slightly irritating to the eye.
Respiratory Irritation	: Slightly irritating to respiratory system.
Respiratory or skin sensitisation	: Not expected to be a sensitiser.
Aspiration hazard	: Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Germ Cell Mutagenicity	: Not mutagenic.
Carcinogenicity	: Not expected to be carcinogenic.

Material	Carcinogenicity Classification
Toluene	ACGIH: Not classifiable as a human carcinogen.
Toluene	IARC: Not classifiable as to carcinogenicity to humans.
Toluene	GHS / CLP: No carcinogenicity classification

Reproductive and Developmental Toxicity	: Suspected of damaging the unborn child. Does not impair fertility.
Specific target organ toxicity - single exposure	: Inhalation of vapors or mists may cause irritation to the respiratory system.
Specific target organ toxicity - repeated exposure	: Central nervous system: repeated exposure affects the nervous system. Effects were seen at high doses only. Respiratory system: repeated exposure affects the respiratory system. 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 color 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.
Additional Information	: Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest. Abuse of vapors has been associated with organ damage and death.

Safety Data Sheet

12. ECOLOGICAL INFORMATION

Basis for Assessment	:	Ecotoxicological data are based on product testing.
Ecotoxicity:		
Acute Toxicity		
Fish	:	Toxic: LL/EL/IL50 1-10 mg/l
Aquatic crustacea	:	Toxic: LL/EL/IL50 >1 - <=10 mg/l
Algae/aquatic plants	:	Practically non toxic: LL/EL/IL50 > 100 mg/l
Microorganisms	:	Data not available.
Chronic Toxicity		
Fish	:	NOEC/NOEL > 1.0 - <=10 mg/l (based on test data)
Aquatic crustacea	:	NOEC/NOEL > 0.1 - <=1.0 mg/l
Mobility	:	Floats on water. If product enters soil, one or more constituents will be mobile and may contaminate groundwater.
Persistence/degradability	:	Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Bioaccumulative Potential	:	Does not bioaccumulate significantly.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	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 water.
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 recover or metal reclaim
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION**Land (as per ADR classification): Regulated**

Class	:	3
Packing group	:	II
Hazard identification no.	:	33
UN number	:	1294
Danger label (primary risk)	:	3
UN proper shipping name	:	Toluene
Environmental hazards	:	No

IMDG

Identification number	UN 1294
UN proper shipping name	TOLUENE

YOUNG SUN CHEMTRADE CO., LTD.

Toluene

Version 2.1

Effective Date 2015/08/12

Safety Data Sheet

Class / Division	3
Packing group	II
Marine pollutant:	No

IATA (Country variations may apply)

UN number	: 1294
UN proper shipping name	: Toluene
Class / Division	: 3
Packing group	: II

15. REGULATORY INFORMATION

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

Chemical Inventory Status

AICS	: Listed.	
DSL	: Listed.	
INV (CN)	: Listed.	
ENCS (JP)	: Listed.	(3)-2
TSCA	: Listed.	
EINECS	: Listed.	203-625-9
KECI (KR)	: Listed.	97-1-298
KECI (KR)	: Listed.	KE-33936
PICCS (PH)	: Listed.	

Local Regulations

Workplace Safety and Health Act & Workplace Safety and Health (General Provision) Regulations	: This product is subject to the SDS, Labelling, PEL and other requirements in the Act/ Regulations.
Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations	: This product is not subject to control under this Act/ Regulation.
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations	: This product is subject to the requirement of this regulation.
Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations	: This product is subject to the requirement of this regulation.
Misuse Drug Act	: This product is subject to the requirement in the Act/Regulations.

16. OTHER INFORMATION

YOUNG SUN CHEMTRADE CO., LTD.

Toluene

Version 2.1

Effective Date 2015/08/12

Safety Data Sheet

GHS Hazard statements

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs or organ systems through prolonged or repeated exposure.
H401	Toxic to aquatic life.

MSDS Version Number : 2.1

MSDS Effective Date : 2015/08/12

MSDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.

Uses and Restrictions : Raw material for use in the chemical industry.
Use only in industrial processes.

MSDS Distribution : The information in this document should be made available to all who may handle the product

Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.