SAFETY DATA SHEET

Toluene Reference, Fuel Grade

Version 1.7

according to GB/T 16483 and GB/T 17519

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name: Toluene Reference, Fuel Grade
Material: 1016965, 1016964, 1016968, 1016967, 1016963, 1016966

Use: Reference Fuel

Company: Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Local: Chevron Phillips Chemicals (Shanghai) Corporation
Room 1810-1812, Shanghai Mart,
2299 Yan An Road (W),
Shanghai, PRC 200336

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: Big +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-(11)59839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture
GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)

Emergency Overview

SDS Number: 100000013055

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SAFETY DATA SHEET

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Danger

Form: Non-viscous

Physical state: Liquid

Color: Clear

Odor: Strong gasoline

Hazards:

- Highly flammable liquid and vapor. May be harmful if inhaled.
- Causes skin irritation. Suspected of damaging the unborn child.
- May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Classification

- Flammable liquids, Category 2
- Acute toxicity, Category 5, Inhalation
- Skin corrosion/irritation, Category 2
- Reproductive toxicity, Category 2
- Specific target organ toxicity - single exposure, Category 3, Narcotic effects
- Specific target organ toxicity - repeated exposure, Category 2
- Aspiration hazard, Category 1
- Short-term (acute) aquatic hazard, Category 2
- Long-term (chronic) aquatic hazard, Category 3

Labeling

Symbol(s):

![Danger Symbol](image)

Signal Word:

Danger

Hazard Statements:

- H225: Highly flammable liquid and vapor.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H333: May be harmful if inhaled.
- H336: May cause drowsiness or dizziness.
- H361d: Suspected of damaging the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H401: Toxic to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

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

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

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

Disposal:
P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms: Toluol
Toluene (Reference Fuel)

Molecular formula: C7H8

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. / EINECS-No.</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>99.95</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>0.05</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

General advice: Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled: Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.
### Toluene Reference, Fuel Grade

**Version 1.7**

**Revision Date 2019-10-13**

<table>
<thead>
<tr>
<th>In case of skin contact</th>
<th>: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In case of eye contact</td>
<td>: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.</td>
</tr>
<tr>
<td>If swallowed</td>
<td>: Keep respiratory tract clear. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital. Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.</td>
</tr>
</tbody>
</table>

#### SECTION 5: Firefighting measures

<table>
<thead>
<tr>
<th>Flash point</th>
<th>: 4.4 °C (39.9 °F) Method: closed cup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>: 529 °C (984 °F)</td>
</tr>
<tr>
<td>Suitable extinguishing media</td>
<td>: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>: High volume water jet.</td>
</tr>
<tr>
<td>Specific hazards during fire fighting</td>
<td>: Do not allow run-off from fire fighting to enter drains or water courses.</td>
</tr>
<tr>
<td>Special protective equipment for fire-fighters</td>
<td>: Wear self-contained breathing apparatus for firefighting if necessary.</td>
</tr>
<tr>
<td>Further information</td>
<td>: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.</td>
</tr>
<tr>
<td>Fire and explosion protection</td>
<td>: Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>: Carbon oxides.</td>
</tr>
</tbody>
</table>

#### SECTION 6: Accidental release measures

| Personal precautions | : Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate |

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SECTION 7: Handling and storage

Handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers: No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Use: Reference Fuel

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>CN</th>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Toluene</td>
<td>GBZ 2.1-2007</td>
<td>PC-TWA</td>
<td>50 mg/m3</td>
<td>Skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GBZ 2.1-2007</td>
<td>PC-STEL</td>
<td>100 mg/m3</td>
<td>Skin</td>
</tr>
</tbody>
</table>

Immediately Dangerous to Life or Health Concentrations (IDLH)

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Number:100000013055</td>
<td>5/15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Toluene Reference, Fuel Grade

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Toluene 108-88-3 2002-04-30

Not applicable

Biological exposure indices

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Sampling time</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>hippuric acid: 1 mol/mol creatinine (Urine)</td>
<td>End of workshift (after exposure has ended)</td>
<td>2007-01-04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hippuric acid: 1.5 g/g creatinine (Urine)</td>
<td>End of workshift (after exposure has ended)</td>
<td>2007-01-04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hippuric acid: 11 Millimoles per liter (Urine)</td>
<td>End of workshift (after exposure has ended)</td>
<td>2007-01-04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hippuric acid: 2 g/l (Urine)</td>
<td>End of workshift (after exposure has ended)</td>
<td>2007-01-04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>toluene: 20 mg/m³ (terminal exhaled air)</td>
<td>End of workshift (15-30 min after exposure has ended)</td>
<td>2007-01-04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>toluene: 5 mg/m³ (terminal exhaled air)</td>
<td>Prior to shift</td>
<td>2007-01-04</td>
</tr>
</tbody>
</table>

Engineering measures

Engineering measures
Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection: Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may
Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection: Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form: Non-viscous
Physical state: Liquid
Color: Clear
Odor: Strong gasoline

Safety data

Flash point: 4.4 °C (39.9 °F)
Method: closed cup
Lower explosion limit: 1.2 % (V)
Upper explosion limit: 7.1 % (V)
Oxidizing properties: no
### Toluene Reference, Fuel Grade

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- **Autoignition temperature**: 529 °C (984 °F)
- **Molecular formula**: C7H8
- **Molecular weight**: 92.15 g/mol
- **pH**: Not applicable
- **Pour point**: No data available
- **Freezing point**: -94.5 °C (-138.1 °F)
- **Boiling point/boiling range**: 110.6 °C (231.1 °F)
- **Vapor pressure**: 1.10 PSI at 37.8 °C (100.0 °F)
- **Relative density**: 0.87 at 15.6 °C (60.1 °F)
- **Density**: 0.9 g/cm³
- **Water solubility**: Soluble in alcohol, benzene, and ether; insoluble in water.
- **Partition coefficient: n-octanol/water**: No data available
- **Viscosity, kinematic**: No data available
- **Relative vapor density**: 2.8 (Air = 1.0)
- **Evaporation rate**: 4.5
- **Percent volatile**: > 99 %
- **Conductivity**: 8 pSm at 20 °C
  - Method: ASTM D4308

### SECTION 10: Stability and reactivity

- **Reactivity**: No decomposition if stored and applied as directed.
- **Chemical stability**: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. No decomposition if stored and applied as directed.

**Possibility of hazardous reactions**

---

**SDS Number:** 100000013055 **Revision Date:** 2019-10-13

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Hazardous reactions: Hazardous polymerization does not occur.

Hazardous reactions: Vapors may form explosive mixture with air.

Further information: No decomposition if stored and applied as directed.

Conditions to avoid: Heat, flames and sparks.

Materials to avoid: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous decomposition products: Carbon oxides

Other data: No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

**Toluene Reference, Fuel Grade**

**Acute oral toxicity**: LD50: > 5,000 mg/kg  
Method: Acute toxicity estimate

**Acute inhalation toxicity**: LC50: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Acute toxicity estimate

**Acute dermal toxicity**: LD50: > 5,000 mg/kg  
Method: Acute toxicity estimate

**Skin irritation**: Irritating to skin.  
May cause skin irritation in susceptible persons.

**Eye irritation**: Eye irritation.  
May cause irreversible eye damage.

**Sensitization**

Toluene: Did not cause sensitization on laboratory animals.

Benzene: Did not cause sensitization on laboratory animals.

**Repeated dose toxicity**: Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:  
Target Organs: Auditory organs  
Estimated based on individual component values.
Genotoxicity in vitro

Toluene

: Test Type: Ames test
Result: negative

Test Type: Sister Chromatid Exchange Assay
Result: negative

Test Type: Mouse lymphoma assay
Result: negative

Test Type: Cytogenetic assay
Result: negative

Benzene

Test Type: Ames test
Result: negative

Test Type: Cytogenetic assay
Result: positive

Test Type: Mouse lymphoma assay
Result: positive

Test Type: Sister Chromatid Exchange Assay
Result: negative

Genotoxicity in vivo

Toluene

: Test Type: Cytogenetic assay
Result: negative

Test Type: Mouse micronucleus assay
Result: negative

Benzene

Test Type: Mouse micronucleus assay
Result: positive

Toluene Reference, Fuel Grade

Carcinogenicity

: Method: Estimated based on individual component values.
Remarks: Suspect cancer hazard

Reproductive toxicity

Toluene

: Species: Rat
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Test period: 95 d
NOAEL Parent: 2000 ppm

Developmental Toxicity

Toluene

: Species: Rat
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Test period: 95 d
NOAEL Teratogenicity: 400-750 ppm
**Toluene Reference, Fuel Grade**

**Aspiration toxicity**: May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

**CMR effects**

**Toluene**
- Carcinogenicity: Not classifiable as a human carcinogen.
- Mutagenicity: Animal testing did not show any mutagenic effects.
- Teratogenicity: Some evidence of adverse effects on development, based on animal experiments.
- Reproductive toxicity: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**Benzene**
- Carcinogenicity: Human carcinogen.
- Mutagenicity: In vivo tests showed mutagenic effects
- Teratogenicity: Did not show teratogenic effects in animal experiments.
- Reproductive toxicity: Animal testing did not show any effects on fertility.

**Further information**: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

### SECTION 12: Ecological information

**Toxicity to fish**

**Toluene**
- LC50: 18 - 36 mg/l
- Exposure time: 96 h
- Species: Pimephales promelas (fathead minnow)

**Benzene**
- LC50: 5.3 mg/l
- Exposure time: 96 h
- Species: Oncorhynchus mykiss (rainbow trout)
- Flow-through test
- Test substance: yes
- Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates**

**Toluene**
- EC50: 3.78 mg/l
- Exposure time: 48 h
- Species: Daphnia magna (Water flea)

**Benzene**
- EC50: 10 mg/l
- Exposure time: 48 h
- Species: Daphnia magna (Water flea)
- Static test
- Test substance: yes
Method: OECD Test Guideline 202

Toxicity to algae

Toluene: EC50: 134 mg/l
Exposure time: 72 h
Species: Chlamydomonas angulosa (Green algae)

Benzene: ErC50: 100 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae)
Test substance: yes
Method: OECD Test Guideline 201

Biodegradability: Expected to be biodegradable

Elimination information (persistence and degradability)

Results of PBT assessment
Toluene: Non-classified vPvB substance, Non-classified PBT substance
Benzene: This substance is not considered to be persistent, bioaccumulating and toxic (PBT), This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Additional ecological information: Toxic to aquatic life.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life., Harmful to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
Toluene: Toxic to aquatic life.
Benzene: Toxic to aquatic life.

Long-term (chronic) aquatic hazard
Toluene: Harmful to aquatic life with long lasting effects.
Benzene: Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.
**Product:** The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

**Contaminated packaging:** Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
UN1294, TOLUENE, 3, II, RQ (TOLUENE)

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN1294, TOLUENE, 3, II, (4.4 °C)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN1294, TOLUENE, 3, II

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN1294, TOLUENE, 3, II, (D/E)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
UN1294, TOLUENE, 3, II

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN1294, TOLUENE, 3, II

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

### SECTION 15: Regulatory information

**Classification and Labeling of Commonly Used Dangerous**
Primary label: Combustible Liquid.

**SDS Number:** 100000013055
SAFETY DATA SHEET

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Version 1.7

Revision Date 2019-10-13

Chemical Substances

Notification status

Europe  REACH: This product is in full compliance according to REACH regulation 1907/2006/EC.

Switzerland  CH INV: On the inventory, or in compliance with the inventory

United States of America (USA)  TSCA: On or in compliance with the active portion of the TSCA inventory

Canada  DSL: All components of this product are on the Canadian DSL

Australia  AICS: On the inventory, or in compliance with the inventory

New Zealand  NZIoC: On the inventory, or in compliance with the inventory

Japan  ENCS: On the inventory, or in compliance with the inventory

Korea  KECI: A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines  PICCS: On the inventory, or in compliance with the inventory

China  IECSC: On the inventory, or in compliance with the inventory

Taiwan  TCSI: On the inventory, or in compliance with the inventory

Other regulations: Law on the Prevention and Control of Occupational Diseases

SECTION 16: Other information

Further information

Legacy SDS Number: 3476

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
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</tbody>
</table>

SDS Number: 100000013055
# Toluene Reference, Fuel Grade

**SAFETY DATA SHEET**

**Version 1.7**

**Revision Date**: 2019-10-13

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
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<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
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<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
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<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
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<thead>
<tr>
<th>Acronym</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
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<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
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<td>STEL</td>
<td>Short-term Exposure Limit</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<td>TWA</td>
<td>Time Weighted Average</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
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<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
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