SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Toluene
Product Use Description: Industrial chemical

Manufacturer or supplier's details
Company: Nexeo Solutions LLC
Address: 3 Waterway Square Place Suite 1000
Woodlands, Tx. 77380
United States of America

Emergency telephone number:
Health North America: 1-855-NEXEO4U (1-855-639-3648)
Health International: 1-855-NEXEO4U (1-855-639-3648)
Transport North America: CHEMTREC 800.424.9300

Additional Information:
Responsible Party: Product Safety Group
E-Mail: msds@nexeosolutions.com
SDS Requests: 1-855-429-2661
SDS Requests Fax: 1-281-500-2370
Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids: Category 2
Skin irritation: Category 2
Eye irritation: Category 2A
Reproductive toxicity: Category 2
Specific target organ toxicity - single exposure: Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure (Inhalation): Category 2 (Auditory system, Eyes)
Aspiration hazard: Category 1

GHS Label element
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Hazard pictograms:

Signal word: Danger

Hazard statements:
H225 Highly flammable liquid and vapour.
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.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary statements:

Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.

Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
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.

Potential Health Effects

Carcinogenicity:
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IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>colourless, transparent</td>
</tr>
<tr>
<td>Odour</td>
<td>sweet, pungent, hydrocarbon-like, aromatic, pleasant</td>
</tr>
<tr>
<td>Hazard Summary</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.

If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.
In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.

If swallowed: Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: No hazardous combustion products are known

Specific extinguishing methods: Use a water spray to cool fully closed containers.

Further information: 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.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
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NFPA Flammable and Combustible Liquids Classification:
Flammable Liquid Class IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions:
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
Avoid formation of aerosol.
Do not breathe vapours/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 workrooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Components</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>TWA 20 ppm</td>
<td></td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 100 ppm 375 mg/m³</td>
<td></td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST 150 ppm 560 mg/m³</td>
<td></td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 200 ppm</td>
<td></td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEIL 300 ppm</td>
<td></td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak 500 ppm</td>
<td></td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 100 ppm 375 mg/m³</td>
<td></td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL 150 ppm 560 mg/m³</td>
<td></td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>Toluene</td>
<td>In blood</td>
<td>Prior to last shift of work-week</td>
<td>0.02 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Toluene</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>0.03 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>o-Cresol</td>
<td>End of shift (As soon as possible after)</td>
<td>0.3 mg/g Creatinine</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>
**Personal protective equipment**

**Respiratory protection**
- No personal respiratory protective equipment normally required.
- In the case of vapour formation use a respirator with an approved filter.

**Hand protection**
- Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**
- Eye wash bottle with pure water
- Tightly fitting safety goggles

**Skin and body protection**
- Impervious clothing
- Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

**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**

- **Appearance**: liquid
- **Colour**: colourless, transparent
- **Odour**: sweet, pungent, hydrocarbon-like, aromatic, pleasant
- **Odour Threshold**: 1.74 - 5 ppm
- **pH**: not applicable
- **Freezing Point (Melting point/freezing point)**: -95 °C (-139 °F)
- **Boiling Point (Boiling point/boiling range)**: 109 - 111 °C (228 - 232 °F)
- **Flash point**: 4 - 7 °C (39 - 45 °F)
- **Evaporation rate**: 2 - 2.4
Flammability (solid, gas) : No data available
Burning rate : No data available
Upper explosion limit : 6.7 - 8 %(V)
Lower explosion limit : 1.2 - 1.4 %(V)
Vapour pressure : 22.5 - 24 mmHg @ 20 °C (68 °F)
Relative vapour density : 3.14
Relative density : 0.87
Density : 7.218 lb/gal @ 25 °C (77 °F)
Bulk density : No data available
Water solubility : soluble
Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : 536 °C
Thermal decomposition : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Vapours may form explosive mixture with air.
Conditions to avoid : Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials : Strong oxidizing agents
SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: 5,000 mg/kg
Method: Calculation method

Components:
108-88-3:
Acute oral toxicity: LD50 (rat, male): > 5,580 mg/kg
Acute inhalation toxicity: LC50 (rat, male and female): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity: LD50 (rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Product:
Result: Irritating to skin.

Components:
108-88-3:
Species: rabbit
Exposure time: 4 h
Result: Irritating to skin.

Serious eye damage/eye irritation

Product:
Result: Irritating to eyes.

Components:
108-88-3:
Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

108-88-3:
Test Type: Maximisation Test (GPMT)
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.
GLP: yes

Germ cell mutagenicity

Components:

108-88-3:
Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Test species: Mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Dominant lethal assay
Test species: mouse (male)
Application Route: inhalation (vapour)
Exposure time: 6 h/d, 5 d/wk for 8 wks
Dose: 0, 100, 400 ppm
Method: OECD Test Guideline 478
Result: negative

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Components:

108-88-3:
Species: rat, (male and female)
Application Route: inhalation (vapour)
Exposure time: 103 wks
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 6.5 h/d, 5 d/wk
NOAEL: No observed adverse effect level: 1,200 ppm

Method: OECD Test Guideline 453
Result: did not display carcinogenic properties
Symptoms: Erosion of nasal epithelium
GLP: yes
Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components: 108-88-3:
Effects on fertility : Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 500 ppm
General Toxicity F1: NOAEC: 500 ppm
Fertility: NOAEC: 2,000 ppm
Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.
GLP: yes

Test Type: Fertility
Species: rat, male and female
Application Route: inhalation (vapour)
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 600 ppm
Symptoms: Decreased sperm count
Result: Animal testing did not show any effects on fertility.

Effects on foetal development : Species: rat
Application Route: inhalation (vapour)
Dose: 0, 250, 750, 1500, 3000 ppm
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 750 ppm
Developmental Toxicity: NOAEC: 750 ppm
Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations.
GLP: yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
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---

**STOT - single exposure**

**Product:** No data available

**Components:**

108-88-3:

<table>
<thead>
<tr>
<th>Exposure routes:</th>
<th>Target Organs:</th>
<th>Assessment:</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Central nervous system</td>
<td>May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.</td>
<td></td>
</tr>
</tbody>
</table>

**STOT - repeated exposure**

**Product:** No data available

**Components:**

108-88-3:

<table>
<thead>
<tr>
<th>Exposure routes:</th>
<th>Target Organs:</th>
<th>Assessment:</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Auditory system, Eyes</td>
<td>May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.</td>
<td></td>
</tr>
</tbody>
</table>

**Repeated dose toxicity**

**Components:**

108-88-3:

Species: rat, male and female

NOAEL: 300

Application Route: inhalation (vapour)

Exposure time: 6, 12, or 18 mths

Number of exposures: 6 h/d, 5 d/wk

Dose: 0, 30, 100, 300 ppm

Method: OECD Test Guideline 453

Repeated dose toxicity - Causes skin irritation.

Assessment
# Safety Data Sheet

## Toluene

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### Aspiration toxicity

**Product:**
May be fatal if swallowed and enters airways.

### Components:

1. **108-88-3:**
   Aspiration Toxicity - Category 1

### Further information

**Product:**
Remarks: 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

### Ecotoxicity

**Components:**

1. **108-88-3:**

   - **Toxicity to fish:** 
     - LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l
     - Exposure time: 96 h
     - Test Type: flow-through test

   - **Toxicity to daphnia and other aquatic invertebrates:**
     - EC50 (Ceriodaphnia dubia): 3.78 mg/l
     - Exposure time: 48 h
     - Test Type: Renewal

   - **Toxicity to algae:**
     - EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l
     - Exposure time: 3 h
     - Test Type: static test

   - **Toxicity to bacteria:**
     - IC50 (Bacteria): 84 mg/l
     - Exposure time: 24 h
     - Test Type: Static

### Ecotoxicology Assessment

- **Acute aquatic toxicity:** Toxic to aquatic life.
- **Chronic aquatic toxicity:** Toxic to aquatic life with long lasting effects.
**Persistence and degradability**

**Components:**

**108-88-3:**

- **Biodegradability:** Inoculum: Sewage
  - Biodegradation: 100%
  - Remarks: Readily biodegradable

**Bioaccumulative potential**

**Components:**

**108-88-3:**

- **Partition coefficient: n-octanol/water:** log Pow: 2.73

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

**Regulation:** 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

**Remarks:** This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

**Additional ecological information:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

---

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

**Waste from residues:** Dispose of in accordance with all applicable local, state and federal regulations.

For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.

**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
SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN1294, TOLUENE, 3, II, Flash Point: 4 - 7 °C (39 - 45 °F)

IMDG (International Maritime Dangerous Goods): UN1294, TOLUENE, 3, II

DOT (Department of Transportation): UN1294, TOLUENE, 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards: Flammable liquid, Moderate skin irritant, Teratogen, Reproductive hazard

WHMIS Classification: B2: Flammable liquid
 : D2A: Very Toxic Material Causing Other Toxic Effects
 : D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Fire Hazard
 : Acute Health Hazard
 : Chronic Health Hazard

SARA 302: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

| 108-88-3 | Toluene | 100 % |

Clean Air Act
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

108-88-3  Toluene  100 %
100-41-4  Ethylbenzene  0.0999 %
71-43-2  Benzene  0.0999 %
98-82-8  Cumene  0.0004 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

108-88-3  Toluene  100 %
100-41-4  Ethylbenzene  0.0999 %
71-43-2  Benzene  0.0999 %
98-82-8  Cumene  0.0004 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

108-88-3  Toluene  100 %
100-41-4  Ethylbenzene  0.0999 %
71-43-2  Benzene  0.0999 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

108-88-3  Toluene  100 %
100-41-4  Ethylbenzene  0.0999 %
71-43-2  Benzene  0.0999 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

108-88-3  Toluene  100 %

US State Regulations

Massachusetts Right To Know

108-88-3  Toluene  90 - 100 %
71-43-2  Benzene  0 - 0.1 %

Pennsylvania Right To Know

108-88-3  Toluene  90 - 100 %
100-41-4  Ethylbenzene  0 - 0.1 %
71-43-2  Benzene  0 - 0.1 %

New Jersey Right To Know

108-88-3  Toluene  90 - 100 %

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

100-41-4  Ethylbenzene
71-43-2  Benzene
98-82-8  Cumene

WARNING: This product contains a chemical known to the State of California to cause birth defects or other
The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>y (positive listing)</td>
<td>(The formulation contains substances listed on the Swiss Inventory)</td>
</tr>
<tr>
<td>United States TSCA Inventory</td>
<td>y (positive listing)</td>
<td>(On TSCA Inventory)</td>
</tr>
<tr>
<td>Canadian Domestic Substances List (DSL)</td>
<td>y (positive listing)</td>
<td>(All components of this product are on the Canadian DSL.)</td>
</tr>
<tr>
<td>Australia Inventory of Chemical Substances (AICS)</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>New Zealand. Inventory of Chemical Substances</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Japan. ENCS - Existing and New Chemical Substances Inventory</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Japan. ISHL - Inventory of Chemical Substances (METI)</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Korea. Korean Existing Chemicals Inventory (KECI)</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
<tr>
<td>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>y (positive listing)</td>
<td>(On the inventory, or in compliance with the inventory)</td>
</tr>
</tbody>
</table>
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Toluene

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<table>
<thead>
<tr>
<th>China. Inventory of Existing Chemical Substances in China (IECSC)</th>
<th>y (positive listing) (On the inventory, or in compliance with the inventory)</th>
</tr>
</thead>
</table>

SECTION 16. OTHER INFORMATION

Further information

NFPA:  
- Flammability: 3
- Health: 2
- Instability: 0

HMIS III:  
- Health: 2*
- Flammability: 3
- Physical Hazard: 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by NEXEO™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

Legacy MSDS: R0000565

Material number:
16076583, 20054, 16052078, 16044492, 16042922, 16020146, 758386, 744411, 744290, 710730, 710841, 659495, 638920, 605418, 599094, 591594, 583688, 577548, 74292, 554035, 554297, 554199, 554034, 550273, 547202, 508613, 508487, 102358, 87252, 86312, 53763, 87252, 102690, 70140, 85974, 53211, 54494, 53551, 86521, 53216, 69928, 102899, 69593, 103631, 54061, 70083, 86461, 102680, 53543, 69918, 85966, 53699, 127683, 508226, 508225, 503157, 502489, 500113, 500040, 20058, 20055, 20052, 20051, 20050, 20049, 508283
### 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>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<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>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>
</tr>
<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>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<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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<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<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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<td>TLV</td>
<td>Threshold Limit Value</td>
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<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
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<tr>
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<td>Time Weighted Average</td>
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