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

Product identifier

Product Name: Sealed Maintenance-Free Lead Acid Battery

Other means of identification

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: Lead acid battery Lead Acid (Non-Spillable) Battery
Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier Name: The Toro Company
Supplier Address: 8111 Lyndale Avenue South
Bloomington
MN
8515
US
Supplier Phone Number: Phone: 952-887-8515
Contact Phone: 951-785-3482
Supplier Email: eden.allen@toro.com
Emergency telephone number: 

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Gases</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Dusts/Mists</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1 Sub-category A</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Carcinogenicity</th>
<th>Category 1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td>Category 1A</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

**GHS Label elements, including precautionary statements**

**Emergency Overview**

**Signal word**

**Danger**

**Hazard Statements**
- Harmful if swallowed
- Harmful if inhaled
- Causes severe skin burns and eye damage
- Causes serious eye irritation
- May cause cancer
- May damage fertility or the unborn child
- May cause damage to organs through prolonged or repeated exposure

**Appearance** Black

**Physical State** Solid containing liquid

**Odor** Neutral

**Precautionary Statements - Prevention**
- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray

**Precautionary Statements - Response**
- Immediately call a POISON CENTER or doctor/physician
- Specific treatment (see supplemental first aid instructions on this label)

**Eyes**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician

**Skin**
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse

**Inhalation**
- 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
- Immediately call a POISON CENTER or doctor/physician
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
5% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Very toxic to aquatic life with long lasting effects

Interactions with Other Chemicals
Use of alcoholic beverages may enhance toxic effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>60 - 100</td>
<td>*</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>10 - 30</td>
<td>*</td>
</tr>
<tr>
<td>Chopped continuous strand fiberglass (&gt;5 microns in diameter)</td>
<td>65997-17-3</td>
<td>3 - 7</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

### 4. FIRST AID MEASURES

**First aid measures**

**General Advice**
First aid is upon rupture of sealed battery.

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice. Remove contact lenses, if present and easy to do. Continue rinsing.

**Skin Contact**
Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation
Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Seek immediate medical attention/advice. Delayed pulmonary edema may occur. Do not breathe dust.

Ingestion
Do NOT induce vomiting. Rinse mouth. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8). Avoid breathing vapors or mists. Do not breathe dust.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness. Severe exposures can lead to shock, circulatory collapse, and death.

Indication of any immediate medical attention and special treatment needed
Notes to Physician
Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists. Avoid generation of dust. Do not breathe dust.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions
Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>

---
<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA: 0.05 mg/m³</th>
<th>TWA: 50 µg/m³</th>
<th>TWA: 50 µg/m³</th>
<th>IDLH: 100 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7439-92-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>TWA: 0.2 mg/m³ thoracic fraction</td>
<td>TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>IDLH: 15 mg/m³</td>
<td></td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chopped continuous strand fiberglass (&gt;5 microns in diameter)</td>
<td>TWA: 1 fiber/cc (respirable)</td>
<td>TWA: 1 fiber/cc (respirable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65997-17-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures
- Showers
- Eyewash stations
- Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
None required for consumer use. If splashes are likely to occur: Face protection shield.

Skin and Body Protection
Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

Respiratory Protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid containing liquid</td>
<td>Odor Neutral</td>
</tr>
<tr>
<td>Appearance</td>
<td>Solid</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture...
Inhalation
Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Harmful by inhalation.

Eye Contact
Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Expected to be an irritant based on components.

Skin Contact
Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.

Ingestion
Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>= 2140 mg/kg (Rat)</td>
<td>-</td>
<td>= 510 mg/m³ (Rat) 2 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Erythema (skin redness). Burning. May cause blindness. Coughing and/or wheezing. May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
No information available.

Mutagenic Effects
No information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>A3</td>
<td>Group 2A</td>
<td>Reasonably Anticipated</td>
<td>X</td>
</tr>
<tr>
<td>7439-92-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chopped continuous strand fiberglass (&gt;5 microns in diameter)</td>
<td>A2</td>
<td></td>
<td>Group 3</td>
<td></td>
</tr>
<tr>
<td>65997-17-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity
Product is or contains a chemical which is a known or suspected reproductive hazard. Contains a known or suspected reproductive toxin.

Developmental Toxicity
Contains ingredients that have suspected developmental hazards. Inorganic lead compounds can cause developmental damage.

STOT - single exposure
No information available.

STOT - repeated exposure
Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic Toxicity
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Possible risk of irreversible effects. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system.

Target Organ Effects

Aspiration Hazard
No information available.

Numerical measures of toxicity  Product Information
The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
556.00  mg/kg

ATEmix (inhalation-gas)
6,429.00  ppm (4 hr)

ATEmix (inhalation-dust/mist)
1.20  mg/l

ATEmix (inhalation-vapor)
16.00  ATEmix
12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods
This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging
Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number
D002 D008

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1</td>
<td>(hazardous constituent - no waste number)</td>
<td>Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K064, K065, K066, K069, K086, K100, K176</td>
<td>5.0 mg/L regulatory level</td>
<td></td>
</tr>
</tbody>
</table>

California Hazardous Waste Codes 792
This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1</td>
<td>Toxic</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Toxic Corrosive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name  Non regulated
Hazard Class          N/A
Marine Pollutant     This product contains a chemical which is listed as a severe marine pollutant according to DOT

TDG                  Not regulated
Marine Pollutant  This product contains a chemical which is listed as a marine pollutant according to TDG.

MEX  Not regulated

ICAO  Not regulated

IATA  Not regulated

Proper Shipping Name  Non regulated

Hazard Class  N/A

IMDG/IMO  Not regulated

Marine Pollutant  This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

RID  Not regulated

ADR  Not regulated

ADN  Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA  Complies

DSL  All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead - 7439-92-1</td>
<td>7439-92-1</td>
<td>60 - 100</td>
<td>0.1</td>
</tr>
<tr>
<td>Sulfuric acid - 7664-93-9</td>
<td>7664-93-9</td>
<td>10 - 30</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard  No
Chronic Health Hazard  No
Fire Hazard  No
Sudden release of pressure hazard  No
Reactive Hazard  No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead - 7439-92-1</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid - 7664-93-9</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1</td>
<td>10 lb</td>
<td></td>
<td>RQ 10 lb final RQ</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1</td>
<td>Carcinogen Developmental Female Reproductive Male Reproductive</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico
National occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead 7439-92-1 ( 60 - 100 )</td>
<td>A3</td>
<td>Mexico: TWA= 0.15 mg/m³</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9 ( 10 - 30 )</td>
<td>A2</td>
<td>Mexico: TWA 1 mg/m³</td>
</tr>
</tbody>
</table>

Mexico - Occupational Exposure Limits - Carcinogens A2 - Suspected Human Carcinogen A3 - Confirmed Animal Carcinogen

Canada
WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>
Prepared By | Product Stewardship  
|----------------------  
| 23 British American Blvd.  
| Latham, NY 12110  
| 1-800-572-6501  

Issuing Date | 28-May-2013  
Revision Date | 03-Sep-2014  
Revision Note | No information available

Disclaimer
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.

End of Safety Data Sheet
## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

**Product Name**  
Toro 4 Cycle Oil

**Other means of identification**

**Synonyms**  
None

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

**Recommended Use**  
Engine (motor) oil for Auto or Boat

**Uses advised against**  
No information available

**Details of the supplier of the safety data sheet**

**Supplier Name**  
The Toro Company

**Supplier Address**  
8111 Lyndale Avenue South  
Bloomington  
MN  
8515  
US

**Supplier Phone Number**  
Phone: 952-887-8515  
Contact Phone 951-785-3482  
eden.allen@toro.com

## 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Carcinogenicity | Category 1A |

**GHS Label elements, including precautionary statements**

**Emergency Overview**

| Signal word | Danger |
Hazard Statements
May cause cancer

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Causes mild skin irritation

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic</td>
<td>64742-54-7</td>
<td>60 - 100</td>
<td>*</td>
</tr>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate</td>
<td>72162-32-4</td>
<td>1 - 5</td>
<td>*</td>
</tr>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts</td>
<td>68649-42-3</td>
<td>1 - 5</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES
First aid measures

**General Advice**
Note: When using this product in high pressure equipment - Accidental high velocity dermal injection of this material requires immediate medical attention.

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Skin Contact**
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

**Inhalation**
Remove to fresh air. Get medical attention immediately if symptoms occur.

**Ingestion**
Call a physician or poison control center immediately. Do NOT induce vomiting.

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

**Most Important Symptoms and Effects**
No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**
Treat symptomatically.

---

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**
CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific Hazards Arising from the Chemical**
No information available.

**Uniform Fire Code**
Combustible Liquid: III-B

**Hazardous Combustion Products**
Carbon oxides.

**Explosion Data**

**Sensitivity to Mechanical Impact**
No.

**Sensitivity to Static Discharge**
No.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage
Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

Incompatible Products
Oxidizing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic</td>
<td>TWA: 5 mg/m³, as oil mist, mineral</td>
<td>TWA: 5 mg/m³, as oil mist, mineral</td>
<td>-</td>
</tr>
<tr>
<td>64742-54-7</td>
<td>STEL: TWA: 10 mg/m³, as oil mist, mineral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate</td>
<td>-</td>
<td>TWA: 1 mg/m³ Ni (vacated), TWA: 0.1 mg/m³ Ni</td>
<td>IDLH: 10 mg/m³ Ni</td>
</tr>
<tr>
<td>72162-32-4</td>
<td></td>
<td>TWA: 0.015 mg/m³ except Nickel carbonyl Ni</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health
Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tight sealing safety goggles.

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory Protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures
When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Oil, Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, amber</td>
<td>Odor</td>
<td>Oily</td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>UNKNOWN</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>400 °C / 752 °F</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>254 °C / 489 °F</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Negligible</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Information

Softening Point                  | No data available             |                 |                         |
VOC Content (%)                  | No data available             |                 |                         |
Particle Size                     | No data available             |                 |                         |
10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials
Oxidizing agent.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.
Eye Contact Specific test data for the substance or mixture is not available.
Skin Contact Specific test data for the substance or mixture is not available.
Ingestion Specific test data for the substance or mixture is not available.

Component Information

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.
Chemical Name | ACGIH | IARC | NTP | OSHA |
---|---|---|---|---|
Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7 | A2 | Group 1 | | X |
Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate 72162-32-4 | | Group 1 | Known | X |

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Chronic Toxicity
Contains a known or suspected carcinogen.

Target Organ Effects
Skin.

Aspiration Hazard
No information available.

Numerical measures of toxicity  Product Information

The following values are calculated based on chapter 3.1 of the GHS document
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7</td>
<td>96h LC50: &gt; 5000 mg/L (Oncorhynchus mykiss)</td>
<td>48h EC50: &gt; 1000 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts 68649-42-3</td>
<td>96h LC50: 1.0 - 5.0 mg/L (Pimephales promelas) 96h LC50: 10.0 - 35.0 mg/L (Pimephales promelas)</td>
<td>48h EC50: 1 - 1.5 mg/L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.
13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

California Hazardous Waste Codes 221

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts 68649-42-3</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name NON REGULATED
Hazard Class N/A

TDG

Not regulated

MEX

Not regulated

ICAO

Not regulated

IATA

Proper Shipping Name NON REGULATED
Hazard Class N/A

IMDG/IMO

N/A

RID

Not regulated

ADR

Not regulated

ADN

Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate 72162-32-4</td>
<td>72162-32-4</td>
<td>1 - 5</td>
<td>0.1</td>
</tr>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts - 68649-42-3</td>
<td>68649-42-3</td>
<td>1 - 5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
- Acute Health Hazard: No
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate 72162-32-4</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts - 68649-42-3</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate 72162-32-4</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts - 68649-42-3</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium phenolate 72162-32-4</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico
National occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, nickel salt, reaction products with sulfurized calcium</td>
<td></td>
<td>Mexico: TWA 0.1 mg/m³</td>
</tr>
<tr>
<td>phenolate 72162-32-4 (1 - 5)</td>
<td></td>
<td>Mexico: STEL 0.3 mg/m³</td>
</tr>
</tbody>
</table>

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
D2A - Very toxic materials

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1*</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Chronic Hazard Star Legend  *= Chronic Health Hazard

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date
16-Mar-2015

Revision Date
16-Mar-2015

Revision Note
No information available

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End of Safety Data Sheet
SECTION 1  CHEMICAL PRODUCT IDENTIFICATION

Product: TORO PREMIUM FUEL TREATMENT
MSDS Number: 12009
Product Type: Fuel additive
Revision Date: 11/5/2013

SECTION 2  COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>CAS #</th>
<th>%</th>
<th>OSHA TWA</th>
<th>OSHA STEL</th>
<th>ACGIH TWA</th>
<th>SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light hydrotreated distillate</td>
<td>64742-47-8</td>
<td>--</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>NO</td>
</tr>
<tr>
<td>Light aromatic solvent naphtha</td>
<td>64742-95-6</td>
<td>--</td>
<td>25 ppm</td>
<td>--</td>
<td>--</td>
<td>NO</td>
</tr>
<tr>
<td>Trimethylbenzene, 1,2,3-</td>
<td>526-73-8</td>
<td>&lt;5</td>
<td>25 ppm</td>
<td>--</td>
<td>--</td>
<td>NO</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>&lt;5</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>--</td>
<td>NO</td>
</tr>
</tbody>
</table>

Comments:
* - applicable to oil mist, not defined for base oils.
TWA – Time Weighted Average is the employee’s average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
STEL – Short Term Exposure Limit is the employee’s 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

SECTION 3  HAZARDOUS IDENTIFICATION

WARNING:
- MAY CAUSE EYE IRRITATION
- MAY CAUSE SKIN IRRITATION
- COMBUSTIBLE (per NFPA Standards)
- MAY BE HARMFUL IF INHALED
- HARMFUL IF SWALLOWED

Eye contact: Direct contact may cause irritation, redness, tearing and blurred vision.
Skin contact: Avoid prolonged skin contact. This product contains materials that may cause skin irritation. Prolonged or repeated contact may result in dermatitis (dryness, chapping and reddening of skin).
Inhalation: Overexposure by inhalation of material may cause nonspecific discomfort, such as nausea, headache, or weakness. Caution should be taken to prevent aerosolization or misting of this product without proper respiratory protection.
Ingestion: Do not ingest. Primary danger is due to lung aspiration. Due to the very light viscosity aspiration may be expected. Should aspiration occur, may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking and gagging are often noted at the time of aspiration. This product has laxative properties and may result in abdominal cramps and diarrhea.
Other: Not applicable.

SECTION 4  FIRST AID MEASURES

Eye contact: Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If irritation persists seek medical attention.
Skin contact: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. Wash contaminated clothing before reuse.
Inhalation: If overcome by inhalation of vapors, remove to fresh air. Use oxygen if there is difficulty breathing or artificial respiration if breathing has stopped. Do not leave
Ingestion:

Do not induce vomiting unless directed by a physician. Give 2 glasses of water or milk.

During vomiting there is a danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. Seek immediate medical attention.

Other:

Not applicable.

SECTION 5  FIRE FIGHTING MEASURES

Flash point: 79°C (175°F) by ASTM D 92 (COC).

Flammable limits: Not determined.

Extinguishing media: Use water spray, dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.

Special firefighting procedures: Evacuate area and fight fire from a safe distance. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak.

Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible (safely). Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

Fire fighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

Unusual fire & explosion hazards: Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.

Byproducts of combustion: Fires involving this product may release oxides of carbon, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.

Autoignition temperature: Not determined.

Explosion data: Not determined. Care should always be exercised in dust/mist areas.

Other: Not applicable.

SECTION 6  ACCIDENTAL RELEASE MEASURES

Spill control procedures (land): Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities. In case of road spill or accident contact Chem-Trec (800-424-9300).

Spill control procedures (water): Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).

Waste disposal method: Most oil based products are incinerated, land-filled or reclaimed. All disposals
must comply with federal, state, and local regulations. The material, if spilled or
discarded may be a regulated waste. Refer to state and local regulations.
Department of Transportation (DOT) regulations may apply for transporting this
material when spilled. See Section 14.

Other:
CAUTION - If spilled material is cleaned up using a regulated solvent, the
resulting waste mixture will be regulated.

SECTION 7 | HANDLING AND STORAGE

Handling procedures: Keep containers closed when not in use. Do not transfer to unmarked
containers. Fire extinguishers should be kept readily available. See NFPA 30
and OSHA 1910.106 – Flammable and Combustible Liquids. Empty containers
retain product residue which may exhibit hazards of material, therefore do not
pressurize, cut, glaze, weld, or use for any other purposes. Return drums to
reclamation centers for proper cleaning and reuse.

Storage procedures: Store containers away from heat, sparks, open flame, or oxidizing materials.

Additional information: No additional information.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection: Applicable mainly to persons in repeated contact situations such as packaging
of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection: None required if airborne concentrations are maintained below threshold limits
listed on page one. Otherwise a respiratory protection program meeting OSHA
1910.134 and ANSI Z88.2 requirements must be followed. Where misting may
occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form
dust/mist air purifying respirator.

Eye protection: Eye protection is strongly recommended. If material is handled such that it
could be splashed into the eyes, wear safety glasses with side shields or
vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization
and absorption.

Other protection: Use of an apron and overboots of chemically impervious materials such as
neoprene or nitrile rubber is recommended to avoid skin sensitization and
absorption. If handling hot material use insulated protective equipment.

Local control measures: Use adequate ventilation when working with material in an enclosed area.
Mechanical methods such as fume hoods or area fans may be used to reduce
localized vapor/mist areas. If vapor or mist is generated when the material
handled, adequate ventilation in accordance with good engineering practice
must be provided to maintain concentrations below the specified exposure.
Eyewash stations and showers should be available in areas where this material
is used and stored.

Other: Consumption of food and drink should be avoided in work areas where product
is present. Always wash hands and face with soap and water before eating,
 drinking or smoking.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Vapor pressure: Not determined.
API gravity: 42.2° at 15.6° C (60.0° F).
Density: 6.78 lbs/gal at 15.6° C (60.0° F).
Specific gravity: 0.8146 at 15.6° C (60.0° F).
Solubility: Negligible in water, soluble in most hydrocarbon solvents.
Vapor density (air=1): >1.
Evaporation rate (n-Butyl Acetate=1): Not determined.
Odor: Mild, Solvent odor.
Appearance: Thin fluid, Green.
Viscosity: .9 cSt at 100° C (212° F).

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1.7 cSt at 40°C (104°F).
Boiling point: Not determined.
Pour/Freeze point: <-40
Other: Not applicable.

**SECTION 10  STABILITY AND REACTIVITY**

**Stability:** Material is stable at room temperatures and pressure.
**Conditions to avoid:** Avoid high temperatures and product contamination.
**Incompatibility with other materials:** Avoid contact with acids and oxidizing materials.
**Decomposition products:** Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, nitrogen and sulfur, and phosphorus; reactive hydrocarbons and irritating vapors.
**Hazardous polymerization:** Will not occur.
**Other:** Not applicable.

**SECTION 11  TOXICOLOGICAL INFORMATION**

**Oral toxicity:** Not determined.
**Dermal toxicity:** Not determined.
**Inhalation toxicity:** On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptotic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms. Based on data from similar materials.
**Dermal sensitization:** Prolonged or repeated contact may make skin more sensitive to other skin sensitizers. Based on data from similar materials.
**Chronic toxicity:** Not determined.
**Carcinogenicity:** The known components of this material are not listed by IARC, NTP, OSHA or ACGIH as known carcinogens.
**Mutagenicity:** Not determined.
**Reproductive toxicity:** The finished material has not been evaluated for toxicology. Data supplied is based upon component evaluations.

This product contains xylene, a chemical that has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations; additionally, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Malformations have not been reported following inhalation exposure. Because of the very high levels of exposure used in these studies, we do not believe that their results imply an increased risk of reproductive toxicity to workers exposed to xylene levels at or below the exposure standard.

Xylene has given negative results in several mutagen testing assays including the Ames assay. In a cancer study sponsored by the National Toxicology Program (NTP), technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years.

Mixed xylenes have been shown to cause probable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loww at low concentrations. Men exposed to 135 to 400 ppm of m-xylene for over 3 hours per day for a total of 4 days showed no hearing loss. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.
This material contains (1,2,3)trimethyl-benzene. Two subchronic inhalation studies, in which rats of each sex were exposed for six hours/day, five days/week for thirteen weeks to 0, 50, 100, 500 or 1200 ppm cumene vapor, found that rats exposed to 500 and 1200 ppm had increases in weights of liver, kidneys and adrenals, and microscopic changes in the kidneys. Decreased motor activity in male rats exposed to 500 and 1200 ppm observed in the first study was not duplicated in the second study. Cataracts in the lenses of the eyes which in both treated and untreated rats in the first study were not statistically higher in treated animals in the second study, indicating that cumene did not cause cataracts. There were no exposure-related changes in hearing (auditory brainstem response), spermatogenesis or responses in the functional observation battery.

In inhalation developmental toxicity studies, there was no evidence of developmental effects either in rabbits exposed to levels up to 2300 ppm on days 6-18 of gestation or in rats exposed to levels up to 1200 ppm on days 6-15 of gestation.

SECTION 12  ECOLOGICAL INFORMATION

Environmental toxicity: Not determined. However, this material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.
Environmental fate: Not determined.
Other: Not applicable.

SECTION 13  DISPOSAL CONSIDERATIONS

Waste disposal: Product contains up to 1% (1,2,3)trimethyl-benzene, which is categorized by U055 (toxic) by RCRA. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This product unadulterated by other materials may be classified as a non-regulated waste in some areas - but still needs to be disposed of at approved facilities. Waste management should be in full compliance with federal, state, and local laws.

Disposal consideration: Most used and non-use oils are incinerated by licensed burner facilities for heat value, or reclaimed by oil recycling services. Look in a local telephone directory or internet for headings under, ‘Waste’, ‘Waste Services’, ‘Waste Disposal’ for companies licensed to handle such material. Additional information can be obtained from local EPA, DNR, Sewer and Land-Fill sites. Unused, packaged fluids may be donated to other companies or charities (fluids MUST be unused).
Other: The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state, and local regulations.

SECTION 14  TRANSPORT INFORMATION

LAND (DOT) – For Quantities 119 gallons or greater:
Proper Shipping Name: COMBUSTIBLE LIQUIDS, N.O.S., (Light Hydrotreated Distillate)
Hazard Class & Division: COMBUSTIBLE LIQUID
ID Number: 1993
Packing Group: III
Label(s): Combustible
Transport Document Name: UN1993, COMBUSTIBLE LIQUIDS, N.O.S., COMBUSTIBLE LIQUID (Light Hydrotreated Distillate), PG III
SECTION 15  REGULATORY INFORMATION

Clean water act/oil pollution act: Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spill or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

TSCA: Material contains (1-methylethyl)-benzene, a listed DOT Marine Pollutant.

Other TSCA: All components of this material are listed in the U.S. TSCA Inventory.

SARA Title III: Not applicable.

Section 302/304 extremely hazardous substances: None.

Section 311, 312 hazard categorization:
- Acute (immediate health effects): YES
- Chronic (delayed health effects): NO
- Fire (hazard): YES
- Reactivity (hazard): NO
- Pressure (sudden release hazard): NO

Section 313 toxic chemicals: Xylene

CERCLA: 80,000 pounds due to xylene (<2.5%).

Other:
- Xylene is additionally listed by the following chemical lists: Massachusetts' RTK, IARC Group 2B, Pennsylvania RTK, New Jersey RTK, CERCLA 302.4, Minnesota RTK.
- Light aromatic solvent naphtha is additionally listed by the following chemical lists: TSCA Section 8(d).
- 1,2,3-trimethylbenzene is additionally listed by the following chemical lists: Massachusetts' RTK, IARC Group 2B, Pennsylvania RTK, New Jersey RTK, Minnesota RTK, TSCA Section 12(b), TSCA Section 4(a), Canadian WHMIS.

WHMIS Classification:
- Class B, Division 3: Combustible Liquids
- Class D, Division 2, Subdivision B: Toxic Material
- Skin or Eye Irritation
- Skin Sensitization

A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) by the petroleum exclusion. However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

SECTION 16  OTHER INFORMATION
This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used. TORO must rely upon information provided by those materials manufacturers or distributors.

Creation Date: 11/5/2013
Revision 1 Date: 12/5/2013
Updates to Section 3 & Section 16 –Additional info to combustible listing. COC Testing of Flashpoint – update. Section 14 – Clarification on proper shipping names depending on quantities for DOT.

File: TORO PREMIUM FUEL TREATMENT
Version: III

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Revisions / Comments: