SAFETY DATA SHEET

1. Identification

Product identifier: ZERO START ETHER – CYLINDER

Other means of identification:
- SDS number: LT16600
- Product code: 3836258, 3833593 A, 3833593 B, 3302657, 3835603, 3835604 A, 3835604 B.

Recommended use: Pressurized, cylinder-contained starting fluid for cold starting diesel engines

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:
- Company name: Cummins Filtration
- Address: 1200 Fleetguard Road
  Cookeville, TN 38506
  United States
- Telephone: 24 Hours per day 1-800-22FILTER (1-800-223-4583)
- E-mail: Not available.
- Emergency phone number: Within Continental U.S. Chemtrec 1-800-424-9300
  Outside U.S. Chemtrec 703-527-3887
- Supplier: Not available.

2. Hazard(s) identification

Physical hazards:
- Flammable gases: Category 2
- Gases under pressure: Dissolved gas

Health hazards:
- Specific target organ toxicity, single exposure: Category 3 narcotic effects
- Aspiration hazard: Category 1

Environmental hazards:
- This mixture does not meet the classification criteria according to OSHA HazCom 2012.

OSHA defined hazards:
- This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Label elements

Signal word: Danger

Hazard statement: Flammable gas. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness.

Precautionary statement:

Prevention:
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.

Response:
- If swallowed: Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Do NOT induce vomiting. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage:
- Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place.

Disposal:
- Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC):
- Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated overexposure may cause liver and kidney effects. In extremely high concentrations, product may act as an asphyxiating and cause increased breathing and pulse rates, fatigue and unconsciousness.

Supplemental information: Not applicable.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYL ETHER</td>
<td>DIETHYL ETHER</td>
<td>60-29-7</td>
<td>65</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
<td>CO2</td>
<td>124-38-9</td>
<td>14</td>
</tr>
<tr>
<td>Distillates (petroleum), Solvent-refined</td>
<td>Not Available</td>
<td>64741-89-5</td>
<td>12</td>
</tr>
<tr>
<td>Light Paraffinic</td>
<td>n-Heptane</td>
<td>142-82-5</td>
<td>9</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

**Inhalation**
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.

**Skin contact**
Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact**
Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**
Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.

**Most important symptoms/effects, acute and delayed**
Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**Suitable extinguishing media**
Powder. Alcohol resistant foam. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
Contents under pressure.

**Special protective equipment and precautions for firefighters**
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**Fire fighting equipment/instructions**
DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

**General fire hazards**
Flammable gas.

**Hazardous combustion products**
Not available.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Isolate area until gas has dispersed. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate personal protective equipment. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. All equipment used when handling the product must be grounded. Avoid breathing mist or vapor. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE (CAS 124-38-9)</td>
<td>PEL</td>
<td>9000 mg/m3</td>
<td></td>
</tr>
<tr>
<td>DIETHYL ETHER (CAS 60-29-7)</td>
<td>PEL</td>
<td>5000 ppm</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)</td>
<td>PEL</td>
<td>400 ppm</td>
<td></td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>PEL</td>
<td>2000 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE (CAS 124-38-9)</td>
<td>STEL</td>
<td>30000 ppm</td>
<td></td>
</tr>
<tr>
<td>DIETHYL ETHER (CAS 60-29-7)</td>
<td>TWA</td>
<td>5000 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)</td>
<td>TWA</td>
<td>400 ppm</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>STEL</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>400 ppm</td>
<td></td>
</tr>
</tbody>
</table>
US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE (CAS 124-38-9)</td>
<td>STEL</td>
<td>54000 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30000 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>9000 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5000 ppm</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>440 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>350 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>85 ppm</td>
<td></td>
</tr>
</tbody>
</table>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

- **Eye/face protection**
  Wear safety glasses with side shields (or goggles).
- **Skin protection**
  - Hand protection
    Wear protective gloves.
  - Other
    Wear appropriate chemical-resistant clothing.
- **Respiratory protection**
  When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- **Thermal hazards**
  Wear appropriate thermal protective clothing, when necessary.
- **General hygiene considerations**
  When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

- **Physical state**
  Liquid.
- **Form**
  Liquid. Dissolved gas. aerosol-type cylinder
- **Color**
  Pale yellow Clear.
- **Odor**
  Ether-like.
- **Odor threshold**
  Not available.
- **pH**
  Not available.
- **Melting point/freezing point**
  Not available.
- **Initial boiling point and boiling range**
  95 °F (35 °C) (for Diethyl Ether)
- **Flash point**
  -49.0 °F (-45.0 °C) (Diethyl ether)
- **Evaporation rate**
  Not available.
- **Flammability (solid, gas)**
  Flammable gas.
- **Upper/lower flammability or explosive limits**
  - Flammability limit - lower (%)
    1.9 (Diethyl ether)
  - Flammability limit - upper (%)
    36 (Diethyl ether)
  - Explosive limit - lower (%)
    Not available.
  - Explosive limit - upper (%)
    Not available.
- **Vapor pressure**
  150 psig @ 70°F (pressure in can)
Vapor density: 2.5 (Diethyl ether)
Relative density: Not available.
Solubility(ies)
   Solubility (water): slight
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Other information
   Specific gravity: 0.7 (concentrate)

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents. Aluminum.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
   Inhalation: May be fatal if swallowed and enters airways. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
   Skin contact: No adverse effects due to skin contact are expected.
   Eye contact: Direct contact with eyes may cause temporary irritation.
   Ingestion: May be fatal if swallowed and enters airways. May be an aspiration hazard. Aspiration may occur during swallowing or vomiting, resulting in lung injury.
Most important symptoms/effects, acute and delayed: Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.
Information on toxicological effects
Acute toxicity: May be fatal if swallowed and enters airways. Narcotic effects.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE (CAS 124-38-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>166170 ppm, 4 hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DIETHYL ETHER (CAS 60-29-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 14200 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>32000 ppm, 4 hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1200 mg/kg</td>
</tr>
</tbody>
</table>
Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)

**Acute**

* **Dermal**
  - LD50: Rabbit > 5000 mg/kg

* **Inhalation**
  - LC50: Rat > 4 mg/l/4h

* **Oral**
  - LD50: Rat > 4000 mg/kg

Heptane (CAS 142-82-5)

**Acute**

* **Dermal**
  - LD50: Rabbit 3400 mg/kg

* **Inhalation**
  - LC50: Rat 102.5 mg/l, 4 hours

* **Oral**
  - LD50: Rat > 15000 mg/kg

---

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**

Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**

Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

Respiratory sensitization: Not available.

Skin sensitizer: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

DIETHYL ETHER (CAS 60-29-7): Not classifiable as to carcinogenicity to humans.


Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Distillates (petroleum), Solvent-refined Light Paraffinic: Known To Be Human Carcinogen.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure: Narcotic effects.

Specific target organ toxicity - repeated exposure: Not classified.

Aspiration toxicity: May be fatal if swallowed and enters airways. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Chronic effects: Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYL ETHER (CAS 60-29-7)</td>
<td>Algae</td>
<td>EC50</td>
</tr>
<tr>
<td></td>
<td>Green algae (Desmodesmus subspicatus)</td>
<td>&gt; 100 mg/l, 72 hours</td>
</tr>
</tbody>
</table>
Components | Species | Test Results
--- | --- | ---
NOEC | Green algae (Desmodesmus subspicatus) | > 100 mg/l, 72 hours
NOEC | Water flea (Daphnia magna) | 100 mg/l, 21 days
IC50 | Crustacea | 1380 mg/l, 48 hours
LC50 | Fathead minnow (Pimephales promelas) | 2560 mg/l, 96 hours
LC50 | Fish | 2560 mg/l, 96 hours
NOEC | Water flea (Daphnia magna) | 100 mg/l, 21 days
LC50 | Rainbow trout (Oncorhynchus mykiss) | 5.738 mg/l, 96 hours (QSAR Estimation)
EC50 | Algae | 4.338 mg/l, 72 Hours (QSAR Estimation)
EC50 | Water flea (Daphnia magna) | 1.5 mg/l, 48 Hours

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**
No data is available on the degradability of this product.

**Bioaccumulative potential**
No data available.

**Partition coefficient n-octanol / water (log Kow)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYL ETHER</td>
<td>0.89</td>
</tr>
<tr>
<td>Heptane</td>
<td>4.66</td>
</tr>
</tbody>
</table>

**Mobility in soil**
No data available.

**Other adverse effects**
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions**
Consult authorities before disposal. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**
Dispose in accordance with all applicable regulations.

**Hazardous waste code**
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1013</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Carbon dioxide</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>2.2</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>2.2</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**Environmental hazards**

| Marine pollutant | Yes |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Packaging exceptions | 306 |
| Packaging non bulk | 302, 304 |
| Packaging bulk | 302, 314, 315 |

**IATA**

| UN number | UN1013 |
UN proper shipping name: Carbon dioxide

Transport hazard class(es):
Class: 2.2

Subsidiary risk: Not applicable.

Packing group: Not applicable.

Environmental hazards: Yes

ERG Code: 2L

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

Other information:
Passenger and cargo aircraft: Allowed.
Cargo aircraft only: Allowed.

IMDG
UN number: UN1013
UN proper shipping name: CARBON DIOXIDE

Transport hazard class(es):
Class: 2.2

Subsidiary risk: Not applicable.

Packing group: Not applicable.

Environmental hazards:
Marine pollutant: Yes

EmS: F-C, S-V

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

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

DOT

IATA; IMDG

Marine pollutant

General information: DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.
15. Regulatory information

US federal regulations

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
DIETHYL ETHER (CAS 60-29-7) Listed.
Heptane (CAS 142-82-5) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
DIETHYL ETHER (CAS 60-29-7)

Safe Drinking Water Act (SDWA)
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
DIETHYL ETHER (CAS 60-29-7) 6584

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
DIETHYL ETHER (CAS 60-29-7) 35 %WV

DEA Exempt Chemical Mixtures Code Number
DIETHYL ETHER (CAS 60-29-7) 6584

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
CARBON DIOXIDE (CAS 124-38-9)
DIETHYL ETHER (CAS 60-29-7)
Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)
Heptane (CAS 142-82-5)

US. New Jersey Worker and Community Right-to-Know Act
CARBON DIOXIDE (CAS 124-38-9)
DIETHYL ETHER (CAS 60-29-7)
Heptane (CAS 142-82-5)

US. Pennsylvania Worker and Community Right-to-Know Law
CARBON DIOXIDE (CAS 124-38-9)
DIETHYL ETHER (CAS 60-29-7)
Distillates (petroleum), Solvent-refined Light Paraffinic (CAS 64741-89-5)
Heptane (CAS 142-82-5)
US. Rhode Island RTK
DIETHYL ETHER (CAS 60-29-7)

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-27-2015
Revision date 03-20-2015
Version # 02
Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.
Bibliography Not available.