1. Identification

Product identifier: QUICK & CLEAN KA INDUSTRIAL DEGREASER

Other means of identification:
- SDS number: 489N-56A
- Product code: HIL01006

Recommended use: Degreaser

Recommended restrictions: DO NOT USE ON GLASS

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name: HILLYARD INDUSTRIES
Address: 302 North Fourth St.
St. Joseph, MO 64501

Contact person: Regulatory Affairs
Telephone number: (816) 233-1321 (Ext. 8285)
Fax: (816) 383-8485
E-mail: regulatoryaffairs@hillyard.com
Emergency telephone #: (800) 424-9300

(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Acute toxicity, inhalation: Category 4
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 1

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Warning

Hazard statement: Causes skin irritation. Causes serious eye irritation. Harmful if inhaled.

Precautionary statement

Prevention: Avoid breathing vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye/face protection.

Response: If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage: Store away from incompatible materials.

Disposal: Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC): None known.

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

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether</td>
<td></td>
<td>111-76-2</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>Silicic acid, Sodium Salt</td>
<td></td>
<td>6834-92-0</td>
<td>1 - &lt; 3</td>
</tr>
<tr>
<td>ACETALDEHYDE</td>
<td></td>
<td>75-07-0</td>
<td>0.00003</td>
</tr>
<tr>
<td>ETHYLENE OXIDE</td>
<td></td>
<td>75-21-8</td>
<td>0.00003</td>
</tr>
</tbody>
</table>

Other components below reportable levels 90 - 100

*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. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin contact**
Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. 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**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors. 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.
This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. 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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

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

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not get this material in contact with skin. Avoid breathing vapor. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE OXIDE (CAS 75-21-8)</td>
<td>STEL</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETALDEHYDE (CAS 75-07-0)</td>
<td>PEL</td>
<td>360 mg/m3</td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether (CAS 111-76-2)</td>
<td>PEL</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>240 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETALDEHYDE (CAS 75-07-0)</td>
<td>Ceiling</td>
<td>25 ppm</td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>ETHYLENE OXIDE (CAS 75-21-8)</td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether (CAS 111-76-2)</td>
<td>TWA</td>
<td>24 mg/m3</td>
</tr>
<tr>
<td>ETHYLENE OXIDE (CAS 75-21-8)</td>
<td>Ceiling</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 mg/m3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.18 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 ppm</td>
</tr>
</tbody>
</table>

Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monobutyl ether (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butoxyacetic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.
Exposure guidelines

US - California OELs: Skin designation
Ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies
Ethylene glycol monobutyl ether (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation
Ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation
Ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Chemical goggles are recommended.

Skin protection
Hand protection
For prolonged or repeated skin contact use suitable protective gloves.

Other
None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

Respiratory protection
Not normally needed.
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards
None known.

General hygiene considerations
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 Clear, red liquid
Physical state Liquid.
Form Liquid.
Color Red
Odor Lemon odor
Odor threshold Not available
pH 12.5 - 13.5
Melting point/freezing point 32 °F (0 °C)
Initial boiling point and boiling range 218 °F (103.33 °C)
Flash point > 218.0 °F (> 103.3 °C) Tag Closed Cup None to boiling
Evaporation rate < 1 (ethyl ether = 1)
Flammability (solid, gas) Not available.
Upper/lower flammability or explosive limits
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.
Vapor pressure 17.5 mm Hg
Vapor density 0.7 Air = 1
Relative density 1.02 at 77°F
Solubility(ies)
Solubility (water) 100 % Complete
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature  Not available
Decomposition temperature  Not available
Viscosity  Not available

Other information
Density  8.50 lb/gal
Percent volatile  95.5 - 96.5 %
VOC (Weight %)  3 %

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  No dangerous reaction known under conditions of normal use.
Conditions to avoid  Avoid temperatures exceeding the flash point. Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials  Acids. Oxidizing agents.
Hazardous decomposition products  No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
Inhalation  Harmful if inhaled.
Skin contact  Causes skin irritation.
  2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact  Causes serious eye irritation.
Ingestion  Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics  Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects
Acute toxicity  Harmful if inhaled.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUICK &amp; CLEAN KA INDUSTRIAL DEGREASER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>13333.333 mg/kg estimated</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Guinea pig</td>
<td>88.8889 mg/l, 2 Hours estimated</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>27600 mg/l, 4 Hours estimated</td>
</tr>
<tr>
<td></td>
<td>23333.334 ppm, 7 Hours estimated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>133.3333 mg/l, 2 Hours estimated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>54666.668 mg/l, 0.5 Hours estimated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32000 mg/l, 4 Hours estimated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15000 ppm, 4 Hours estimated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>255.5556 mg/l, 2 Hours estimated</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>40 g/kg estimated</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>40 g/kg estimated</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
<td>10.6667 g/kg estimated</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>15352.8555 mg/kg estimated</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>ACETALDEHYDE (CAS 75-07-0)</strong></td>
<td>Dermal, Acute</td>
<td>Rabbit: 3540 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Inhalation, LD50</td>
<td>Hamster: 17000 ppm, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse: 31 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 1500 ppm, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37 mg/l, 30 Minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td>Oral, LD50</td>
<td>Dog: &gt; 600 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse: 1230 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 661 mg/kg</td>
</tr>
<tr>
<td><strong>Ethylene glycol monobutyl ether (CAS 111-76-2)</strong></td>
<td>Dermal, Acute</td>
<td>Rabbit: 400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Inhalation, LC50</td>
<td>Mouse: 700 ppm, 7 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 450 ppm, 4 Hours</td>
</tr>
<tr>
<td></td>
<td>Oral, LD50</td>
<td>Guinea pig: 1.2 g/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse: 1.2 g/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rabbit: 0.32 g/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 560 mg/kg</td>
</tr>
<tr>
<td><strong>ETHYLENE OXIDE (CAS 75-21-8)</strong></td>
<td>Inhalation, Acute</td>
<td>Dog: 973 ppm, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guinea pig: 1.8 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse: 1.5 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 1.505 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.44 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.9 mg/l, 1 Hours</td>
</tr>
<tr>
<td></td>
<td>Oral, LD50</td>
<td>Guinea pig: 270 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse: 280 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 72 mg/kg</td>
</tr>
<tr>
<td><strong>Silicic acid, Sodium Salt (CAS 6834-92-0)</strong></td>
<td>Oral, Acute</td>
<td>Mouse: 2400 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat: 1280 mg/kg</td>
</tr>
</tbody>
</table>

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

**Skin corrosion/irritation**
- Causes skin irritation.

**Serious eye damage/eye irritation**
- Causes serious eye irritation.
Respiratory or skin sensitization

Respiratory sensitization  Not available.

Skin sensitization  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

Ethylene glycol monobutyl ether (CAS 111-76-2)  3 Not classifiable as to carcinogenicity to humans.
ETHYLENE OXIDE (CAS 75-21-8)  1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

ACETALDEHYDE (CAS 75-07-0)  Reasonably Anticipated to be a Human Carcinogen.
ETHYLENE OXIDE (CAS 75-21-8)  Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

ETHYLENE OXIDE (CAS 75-21-8)  Cancer

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

Specific target organ toxicity - single exposure  Not classified.

Specific target organ toxicity - repeated exposure  Not classified.

Aspiration hazard  Not available.

Chronic effects  Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

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>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUICK &amp; CLEAN KA INDUSTRIAL DEGREASER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia, 560.3126 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish, 742.6127 mg/l, 96 hours estimated</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACETALDEHYDE (CAS 75-07-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna), 39.4 - 59.1 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas), 28 - 34 mg/l, 96 hours</td>
</tr>
<tr>
<td>ETHYLENE OXIDE (CAS 75-21-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas), 73 - 96 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

* 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)

| ETHYLENE OXIDE | -0.3 |

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
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not contaminate ponds, waterways or ditches with chemical or used container. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

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
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

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 or Exempt.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
ACETALDEHYDE (CAS 75-07-0) 0.1 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)
ACETALDEHYDE (CAS 75-07-0) Listed.
ETHYLENE OXIDE (CAS 75-21-8) Listed.

SARA 304 Emergency release notification
ETHYLENE OXIDE (CAS 75-21-8) 10 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
ETHYLENE OXIDE (CAS 75-21-8) Cancer
Reproductive toxicity
Mutagenicity
Central nervous system
Skin sensitization
Skin irritation
Eye irritation
respiratory tract irritation
Acute toxicity
Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable quantity</th>
<th>Threshold planning quantity, lower value</th>
<th>Threshold planning quantity, upper value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE OXIDE</td>
<td>75-21-8</td>
<td>10</td>
<td>1000 lbs</td>
<td></td>
</tr>
<tr>
<td>SARA 311/312 Hazardous chemical</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SARA 313 (TRI reporting)</td>
<td>Not regulated.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
- ACETALDEHYDE (CAS 75-07-0)
- ETHYLENE OXIDE (CAS 75-21-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
- ACETALDEHYDE (CAS 75-07-0)
- ETHYLENE OXIDE (CAS 75-21-8)

Safe Drinking Water Act (SDWA)

US state regulations

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

US. Massachusetts RTK - Substance List
- ACETALDEHYDE (CAS 75-07-0)
- Ethylene glycol monobutyl ether (CAS 111-76-2)
- ETHYLENE OXIDE (CAS 75-21-8)

US. New Jersey Worker and Community Right-to-Know Act
- ACETALDEHYDE (CAS 75-07-0)
- Ethylene glycol monobutyl ether (CAS 111-76-2)
- ETHYLENE OXIDE (CAS 75-21-8)

US. Pennsylvania Worker and Community Right-to-Know Law
- ACETALDEHYDE (CAS 75-07-0)
- Ethylene glycol monobutyl ether (CAS 111-76-2)
- ETHYLENE OXIDE (CAS 75-21-8)

US. Rhode Island RTK
- ACETALDEHYDE (CAS 75-07-0)
- ETHYLENE OXIDE (CAS 75-21-8)

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.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
- ACETALDEHYDE (CAS 75-07-0) Listed: April 1, 1988
- ETHYLENE OXIDE (CAS 75-21-8) Listed: July 1, 1987

US - California Proposition 65 - CRT: Listed date/Developmental toxin
- ETHYLENE OXIDE (CAS 75-21-8) Listed: August 7, 2009

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin
- ETHYLENE OXIDE (CAS 75-21-8) Listed: February 27, 1987

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin
- ETHYLENE OXIDE (CAS 75-21-8) Listed: August 7, 2009

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>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: 03-25-2015
Version #: 01

HMIS® ratings
- Health: 2
- Flammability: 0
- Physical hazard: 0
Disclaimer

No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.