**Material Safety Data Sheet**

### Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>X-CIDE® 302 INDUSTRIAL BACTERICIDE</th>
<th>Code</th>
<th>XC302</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier</td>
<td>Baker Petrolite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A Baker Hughes Company</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12645 W. Airport Blvd. (77478)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P.O. Box 5050</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sugar Land, TX 77487-5050</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For Product Information/MSDSs Call: 800-231-3606 (8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material Uses</td>
<td>Industrial Bactericide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Date</td>
<td>12/4/2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print Date</td>
<td>12/4/2006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Material Uses**

- Industrial Bactericide.

**24 Hour Emergency Numbers**

- CHEMTREC 800-424-9300 (U.S. 24 hour)
- Baker Petrolite 800-231-3606
- (001)281-276-5400
- CANUTEC 613-996-6666 (Canada 24 hours)
- CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

**National Fire Protection Association (U.S.A.)**

- Health: 3
- Flammability: 30
- Instability: COR
- Specific Hazard

**Section 2. Hazards Identification**

**Physical State and Appearance**

- State: Liquid.
- Color: Amber.
- Odor: Alcohol-like.

**CERCLA Reportable Quantity**

- Not applicable.

**Hazard Summary**

DANGER. May cause chronic effects. Flammable liquid. Vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to a distant ignition source and flash back. Static discharges can cause ignition or explosion when container is not bonded. May be corrosive to eyes, skin and respiratory tract. May cause central nervous system (CNS) effects if inhaled.

**Routes of Exposure**

- Skin (Contact), Eyes, Inhalation.

**Potential acute health effects**

- **Eyes** May be corrosive to the eyes. May cause eye burns and permanent eye injury.
- **Skin** May be corrosive. Skin contact may produce burns.
- **Inhalation** May cause central nervous system (CNS) effects if inhaled. May be irritating to lungs.
- **Ingestion** Not considered a likely route of exposure, however, may be corrosive if swallowed.

**Medical Conditions aggravated by Exposure**

- Exposure to this product may aggravate medical conditions involving the following: respiratory tract, skin/epithelium, eyes.

**See Toxicological Information (section 11)**

**Additional Hazard Identification Remarks**

- May be harmful if ingested. This product may be aspirated into the lungs during swallowing or vomiting of swallowed material. Aspiration into the lungs may produce chemical pneumonitis, pulmonary edema, and hemorrhaging.

*Continued on Next Page*
**Section 3. Composition and Information on Ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Alkyl*-1,3-propylene-diamine acetate (*Coco)</td>
<td>61791-64-8</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

See Section 8 for information on permissible exposure limits and threshold limit values.

**Section 4. First Aid Measures**

**Eye Contact**
Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open. Get medical attention immediately.

**Skin Contact**
Remove contaminated clothing and shoes immediately. Wash affected area with soap and mild detergent and large amounts of lukewarm, gently flowing water until no evidence of chemical remains (for at least 20-60 minutes). Get medical attention if irritation occurs.

**Inhalation**
Remove to fresh air. Oxygen may be administered if breathing is difficult. If not breathing, administer artificial respiration and seek medical attention. Get medical attention if symptoms appear.

**Ingestion**
Get medical attention immediately. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Wash out mouth with water if person is conscious. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions.

**Notes to Physician**
Not available.

**Additional First Aid Remarks**
Not available.

**Section 5. Fire Fighting Measures**

**Flammability of the Product**
Flammable liquid. Vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to a distant ignition source and flash back. Static discharges can cause ignition or explosion when container is not bonded.

**OSHA Flammability Class**
IC

**Products of Combustion**
These products are carbon oxides (CO, CO2) nitrogen oxides (NO, NO2...).

**Fire Hazards in Presence of Various Substances**
Open Flames/Sparks/Static. Heat.

**Fire Fighting Media and Instructions**
In case of fire, use foam, dry chemicals, or CO2 fire extinguishers. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and public waterways. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances and flash back if ignited.

**Protective Clothing (Fire)**
Do not enter fire area without proper personal protective equipment, including NIOSH approved self-contained breathing apparatus.

**Special Remarks on Fire Hazards**
Not available.

Continued on Next Page
### Section 6. Accidental Release Measures

- **Spill**
  - Put on appropriate personal protective equipment. Keep personnel removed and upwind of spill. Shut off all ignition sources; no flares, smoking, or flames in hazard area. Approach release from upwind. Shut off leak if it can be done safely. Contain spilled material. Keep out of waterways. Dike large spills and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances from spill and flash back, if ignited. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

- **Other Statements**
  - Not applicable.

- **Additional Accidental Release Measures Remarks**
  - Not available.

### Section 7. Handling and Storage

- **Handling and Storage**
  - Put on appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Store in a dry, cool and well ventilated area. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed and dry. To avoid fire or explosion, ground container equipment and personnel before handling product.

- **Additional Handling and Storage Remarks**
  - Not available.

### Section 8. Exposure Controls/Personal Protection

- **Exposure Limits**
  - **Isopropanol**
    - ACGIH (United States).
      - TWA: 490 mg/m³ 8 hour/hours.
      - STEL: 980 mg/m³ 15 minute(s).
    - OSHA PEL 1989 (United States).
      - TWA: 200 ppm 8 hour/hours.
      - STEL: 400 ppm 15 minute(s).
    - Isopropyl-1,3-propylene-diamine acetate (*Coco)
      - Not available.

- **Additional Information on Exposure Limits**
  - The OSHA permissible exposure levels shown above are the OSHA 1989 levels or from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Petrolite Corporation recommends that these lower exposure levels be observed as reasonable worker protection.

- **Engineering Controls**
  - Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors or particles below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

- **Personal Protection**

*Continued on Next Page*
Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of personal protective equipment appropriate for these job tasks and conditions.

- **Eyes**: Chemical safety goggles. Use full face shield if splashes could occur.
- **Body**: Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.
- **Respiratory**: Respirator use is not expected to be necessary under normal conditions of use. In poorly ventilated areas, emergency situations or if exposure levels are exceeded, use NIOSH approved full face respirator.
- **Hands**: Chemical resistant gloves. Nitrile or Neoprene gloves.
- **Feet**: Chemical resistant boots or overshoes.

*Other information* Not available.

### Additional Exposure Control Remarks
Not available.

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State and Appearance</th>
<th>Odor</th>
<th>Alcohol-like.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Color</td>
<td>Amber.</td>
</tr>
<tr>
<td>5.5 - 6.5 (Neat - without dilution.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.941 - 0.953 @ 16°C (60°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.84 - 7.94 lbs/gal @ 16°C (60°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Points</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed cup: 24.4°C (76°F) (SFCC)</td>
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<td></td>
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<tr>
<td>Flammable Limits</td>
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<tr>
<td>Autoignition Temperature</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Initial Boiling Point</td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point</td>
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<td></td>
</tr>
<tr>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td></td>
<td>&gt;1 (Air = 1)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td></td>
<td>59.5 - mm Hg @ 20°C (68°F)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td></td>
<td>Not Available or Not Applicable for Solids.</td>
</tr>
<tr>
<td>VOC</td>
<td></td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td>35 - 39 cP @ 1°C (34°F)</td>
</tr>
<tr>
<td>Pour Point</td>
<td></td>
<td>-34.4°C(-30°F)</td>
</tr>
<tr>
<td>Solubility (Water)</td>
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<td>Soluble</td>
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<tr>
<td>Physical Chemical Comments</td>
<td></td>
<td>Not available.</td>
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</tbody>
</table>

### Section 10. Stability and Reactivity

| Stability and Reactivity       | The product is stable. |
| Conditions of Instability      | Not available.          |
| Incompatibility with Various Substances | Oxidizing material. |

*Continued on Next Page*
Hazardous Decomposition Products
Not applicable.

Hazardous Polymerization
Hazardous polymerization is not expected to occur.

Special Stability & Reactivity Remarks
Not available.

Section 11. Toxicological Information

Component Toxicological Information

Acute Animal Toxicity
Isopropanol
ORAL (LD50): Acute: 5045 mg/kg [Rat]. 3600 mg/kg [Mouse]. 4710 mg/kg [Male rat].
DERMAL (LD50): Acute: 12800 mg/kg [Rabbit].
VAPOR (LC50): Acute: 16970 ppm 4 hour/hours [Rat]. 12000 ppm 8 hour/hours [Rat].

Alkyl*-1,3-propylene-diamine acetate (*Coco)
Not available.

Chronic Toxicity Data
1) Isopropanol


In a four month study, inhalation of isopropanol vapors for 20 hours per week by laboratory animals produced bronchitis, pneumonia, and blood effects (International Program of Chemical Safety, 1990, Environmental Health Criteria 103: 2-propanol, World Health Organization). Ataxia (a jerky or shaky movement that occurs during voluntary muscle movement) and microscopic hyaline droplets (fungal or branched structures) in the kidneys were seen in rats exposed to isopropanol at concentrations up to 5000 ppm for 6 hours per day, 5 days per week, for 13 weeks (Burleighflayer et al, 1994). Inhalation of high levels of isopropanol (4,000 and 8,000 ppm for 8 hours) has produced congestion in the liver, lungs, and spleen of laboratory animals (Laham S, et al, 1980, "Drug and Chemical Toxicology").


2) Alkyl*-1,3-propylene-diamine acetate (*Coco)
Not available.

Product Toxicological Information

Acute Animal Toxicity
Not available.

Target Organs
respiratory tract, skin/epithelium, eyes.

Continued on Next Page
Other Adverse Effects
Eye Irritation Score = 4 (Extreme Irritant/Corrosive). Skin Irritation Score = 4 (Extreme Irritant/Corrosive).

Section 12. Ecological Information

Ecotoxicity Not available.
BOD5 and COD Not available.
Biodegradable/OECD Not available.
Toxicity of the Products of Biodegradation Not available.
Special Remarks An EcoTox™ Report, and/or the material's environmental fate is available upon request at the following number: 1-800-235-4249, then press 4.

Section 13. Disposal Considerations
Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, state and local regulations. Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

Additional Waste Remarks Not available.

Section 14. Transport Information

DOT Classification FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Contains: Isopropanol, Alkyl-1,3-propylene-diamine acetate), 3(8), UN2924, III

DOT Reportable Quantity Not applicable.
Marine Pollutant Not applicable.
Additional DOT Information Not available.
Emergency Response Guide Number 132

Section 15. Regulatory Information

HCS Classification Target organ effects. Flammable liquid. Corrosive.

U.S. Federal Regulations Environmental Regulations Extremely Hazardous Substances: Not applicable to any components in this product.
SARA 313 Toxic Chemical Notification and Release Reporting: Not applicable to any components in this product.
SARA 302/304 Emergency Planning and Notification substances: Not applicable to any components in this product.
Hazardous Substances (CERCLA 302): Not applicable to any components in this product.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: fire; immediate health hazard; delayed health hazard;

Continued on Next Page
### Clean Water Act (CWA) 307 Priority Pollutants
Not applicable to any components in this product.

### Clean Water Act (CWA) 311 Hazardous Substances
Not applicable to any components in this product.

### Clean Air Act (CAA) 112(r) Accidental Release Prevention Substances
Not applicable to any components in this product.

### State Regulations
State specific information is available upon request from Baker Petrolite.

### International Regulations

<table>
<thead>
<tr>
<th>Country</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Canada</strong></td>
<td>All components are compliant with or are exempted from listing on the Canadian Domestic Substance List.</td>
</tr>
<tr>
<td><strong>WHMIS (Canada)</strong></td>
<td>B-2, D-2A, E</td>
</tr>
<tr>
<td><strong>European Union</strong></td>
<td>All components are included or are exempted from listing on the European Inventory of Existing Commercial Chemical Substances or the European List of Notified Chemical Substances.</td>
</tr>
<tr>
<td></td>
<td>International inventory status information is available upon request from Baker Petrolite for the following countries: Australia, China, Korea (TCCL), Philippines (RA6969), or Japan.</td>
</tr>
</tbody>
</table>

### Other Regulatory Information
This product does not contain any components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States.

### Section 16. Other Information

#### Other Special Considerations
- File 940
- 04/23/03 - Changes to Sections 2, 5 and 8.
- 06/09/05 - Changes to Sections 2, 3, 5, 8, 9 and 15.
- 12/04/06 - Change to Section 9

In April, 2005, a number of format changes were made. The most notable of these were switching Sections 2 and 3, moving the exposure limits to Section 8, and moving the flash point from Section 5 to Section 9.

### Baker Petrolite Disclaimer

**NOTE:** The information on this MSDS is based on data which is considered to be accurate. Baker Petrolite, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.