1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Isopropyl Alcohol <50%>
PRODUCT DESCRIPTION: Isopropyl Alcohol <50%>
PRODUCT CODE: 213145
PRODUCT FORMULATION NAME: Isopropyl Alcohol <50%>
CHEMICAL FAMILY: Aliphatic Alcohols
GENERIC NAME: 2-Propanol, Isopropanol, IPA

MANUFACTURER
Americhem Sales Corporation
340 North Street
Mason, MI 48854
Contact: Americhem Sales Corporation
Product Stewardship: 517-676-9363
Transportation: 517-676-9363

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEMTREC (U.S.): (800) 424-9300
Canutec (613) 996-6666
Emergency Phone: 800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS#</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>50</td>
<td>67-63-0</td>
<td>200-661-0</td>
</tr>
<tr>
<td>Water</td>
<td>50</td>
<td>7732-18-5</td>
<td>231-791-2</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear, Colorless liquid.
IMMEDIATE CONCERNS: CAUTION! May cause eye and skin irritation.

POTENTIAL HEALTH EFFECTS

EYES: Severe irritation and discomfort. Reversible and/or irreversible corneal damage may occur.
SKIN: No significant effects beyond minor irritation are expected.
INGESTION: Gastrointestinal tract irritation and/or discomfort is possible.
INHALATION: Respiratory tract irritation and/or headaches possible. Significant systemic toxic effects are likely following repeated exposure to high concentrations.
**ROUTES OF ENTRY:** Absorption, Inhalation, Ingestion

4. **FIRST AID MEASURES**

**EYES:** Immediately flush eyes with plenty of water for 15 minutes. If irritation persists, seek medical attention.

**SKIN:** Wash exposed area with mild soap and water. Get medical attention if irritation develops or persists.

**INGESTION:** Do not induce vomiting. Danger from aspirating into lungs exceeds short term toxic effects. Get immediate medical help.

**INHALATION:** Remove victim from area of exposure. If unconscious, give oxygen. Give artificial respiration if not breathing. Get immediate medical attention.

5. **FIRE FIGHTING MEASURES**

**FLASHPOINT AND METHOD:** ~53°F ASTM D56

**FLAMMABLE LIMITS:** 2 to 12

**AUTOIGNITION TEMPERATURE:** Not Available

**EXTINGUISHING MEDIA:** Use dry chemical, foam, or carbon dioxide.

**EXPLOSION HAZARDS:** Vapor accumulations may flash and/or explode if ignited. Keep ignition sources, open flames, etc., away from these fumes.

**FIRE FIGHTING PROCEDURES:** Proper respiratory equipment to protect against the hazardous effects of combustion products is recommended. Water in a straight hose stream may cause fire to spread and should be used as a cooling medium only.

6. **ACCIDENTAL RELEASE MEASURES**

**SMALL SPILL:**

Extinguish all ignition sources and ventilate area. Evacuate all non-essential personnel. Blanket spill with alcohol resistant foam to limit evaporation. Dike area to contain spill and clean up by absorbing on inert absorbent or by other means. Liquid may be flammable even when mixed with water unless heavily diluted (>5:1). Do not flush into sewers or natural waterways.
LARGE SPILL:
Contain material as described above and call the local fire or police department for immediate emergency assistance.

7. HANDLING AND STORAGE

HANDLING:
Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area.

STORAGE:
Store unopened containers under cool, dry and ventilated conditions. Keep away from heat, sparks and flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th></th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Supplier OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
<td>ppm</td>
</tr>
<tr>
<td>2-Propanol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>400</td>
<td>980</td>
<td>400</td>
</tr>
<tr>
<td>STEL</td>
<td>500</td>
<td>1225</td>
<td>500</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure guidelines, additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields or goggles when handling this material.

SKIN: To prevent any contact, wear impervious protective clothing such as neoprene or butyl rubber gloves, apron, boots or whole bodysuit, as appropriate.

RESPIRATORY: Use NIOSH/MSHA approved respirators when vapors or mist concentrations exceed permissible exposure limits.

PROTECTIVE CLOTHING: Chemical resistant boots, apron, etc. as necessary to prevent contamination of clothing and skin contact.
9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Mild alcohol odor
APPEARANCE: Clear
COLOR: Colorless
pH: Not Available
PERCENT VOLATILE: 100
VAPOR PRESSURE: >10 mmHg at 20°C
VAPOR DENSITY: >1.0 (Air=1)
BOILING POINT: ~(180°F)
SOLUBILITY IN WATER: Complete
EVAPORATION RATE: Not Available
SPECIFIC GRAVITY: 0.89 (water=1) at (68°F)

10. STABILITY AND REACTIVITY

STABLE: YES
HAZARDOUS POLYMERIZATION: NO
CONDITIONS TO AVOID: Exposure to excessive heat, open flames and sparks. Avoid conditions that favor the formation of excessive mists and/or fumes.
STABILITY: Stable
POLYMERIZATION: Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Carbon when burned.
INCOMPATIBLE MATERIALS: Strong Acids, Alkalies, Oxidizers. Avoid contact with Aluminum, Zinc, or other reactive metals.

11. TOXICOLOGICAL INFORMATION

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Conditions of use may cause this material to become a hazardous waste as defined by state or federal law. Use approved treatment, transporters and disposal sites.
EMPTY CONTAINER: Keep containers closed when not in use. Do not reuse empty containers.
14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Isopropanol
PRIMARY HAZARD CLASS/DIVISION: 3
UN/NA NUMBER: UN1219
PACKING GROUP: II
LABEL: Flammable Liquid

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:
FIRE: YES PRESSURE GENERATING: NO REACTIVITY: NO
ACUTE: YES CHRONIC: YES
313 REPORTABLE INGREDIENTS: None known to be present at 1% or more by weight (0.1% for Carcinogens)

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: This material or its components are listed in the TSCA inventory.

16. OTHER INFORMATION

REVISION SUMMARY

Revision #: 1
This MSDS replaces the September 25, 2000 MSDS. Any changes in information are as follows:
In Section 1
Prepared By

HMIS CODES

HEALTH: *2 FIRE: 3 REACTIVITY: 0 PROTECTION: D

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for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

**ADDITIONAL MSDS INFORMATION:** Treat as an OSHA Class IB Flammable Liquid.