Section 1: Product and Company Identification

Arc3 Gases
Arc3 Gases - North
1700 Chamberlayne Ave.
Richmond, VA 23222
phone: (804) 388-0302
fax: (804) 788-8904

Arc3 Gases - South
1660 US Highway 301 South
P.O. Box 1708
Dunn, NC 28335
phone: (910) 892-4016
fax: (910) 892-3575

Emergency contact: INFOTRAC 1-800-535-5053

Product Code: Propane
Part Number: SDS# 1000000014

Section 2: Hazards Identification

Hazard Classification:
Flammable (Category 1)
Gases Under Pressure

Hazard Statements:
Contains gas under pressure; may explode if heated
Extremely flammable gas

Precautionary Statements
Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response:
Eliminate all ignition sources if safe to do so.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Storage:
Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Substance</th>
<th>Chemical Family</th>
<th>Trade Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPANE</td>
<td>hydrocarbons, aliphatic</td>
<td>N-PROPANE; DIMETHYLMETHANE; PROPYL HYDRIDE; R-290; PROPYLHYDRIDE; LIQUEFIED PETROLEUM GAS; LPG; &gt;96% NATURAL GRADE; &gt;99.9% PURE GRADE; UN 1978; C3H8</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

<table>
<thead>
<tr>
<th>Skin Contact</th>
<th>Eye Contact</th>
<th>Ingestion</th>
<th>Inhalation</th>
<th>Note to Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.</td>
<td>Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.</td>
<td>If a large amount is swallowed, get medical attention.</td>
<td>If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.</td>
<td>For inhalation, consider oxygen.</td>
</tr>
</tbody>
</table>

Section 5: Fire Fighting Measures

<table>
<thead>
<tr>
<th>Suitable Extinguishing Media</th>
<th>Products of Combustion</th>
<th>Protection of Firefighters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular dry chemical, high expansion foam Large fires: Flood with fine water spray. Avoid carbon dioxide.</td>
<td>Carbon monoxide, carbon dioxide, water and toxic and irritating fumes</td>
<td>• Any self-contained breathing apparatus with a full facepiece. • Any self-contained breathing apparatus with a full facepiece.</td>
</tr>
</tbody>
</table>

Section 6: Accidental Release Measures

<table>
<thead>
<tr>
<th>Personal Precautions</th>
<th>Environmental Precautions</th>
<th>Methods for Containment</th>
</tr>
</thead>
</table>

Methods for Cleanup

<table>
<thead>
<tr>
<th>Methods for Cleanup</th>
<th>Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact emergency personnel</td>
<td>None</td>
</tr>
</tbody>
</table>

Protect from sunlight.
Store in well-ventilated place.
Section 7: Handling and Storage

Handling

Storage
Keep separated from incompatible substances.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
PROPANE: 1000 ppm (1800 mg/m3) OSHA TWA 1000 ppm (1800 mg/m3) NIOSH recommended TWA 10 hour(s) LIQUIFIED PETROLEUM GAS (LPG): 1000 ppm (1800 mg/m3) OSHA TWA 1000 ppm ACGIH TWA 1000 ppm (1800 mg/m3) NIOSH recommended TWA 10 hour(s) ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA

Engineering Controls
Handle only in fully enclosed systems.

Eye Protection
For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection
For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

Respiratory Protection
Any self-contained breathing apparatus with a full facepiece.

General Hygiene considerations
- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Appearance</th>
<th>Color</th>
<th>Change in Appearance</th>
<th>Physical Form</th>
<th>Odor</th>
<th>Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>Clear</td>
<td>Colorless</td>
<td>N/A</td>
<td>Gas</td>
<td>Gasoline odor</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Flash Point
-157 F (-105 C) Not available Not available 842 F (450 C) 0.095 0.021

Boiling Point
-40 F (-40 C) -310 F (-190 C) 6398 mmHg @ 21.1 C 1.55 (Air=1) 0.5853 @ -45 C Very slightly soluble Not applicable 5000-20000 ppm Not applicable Not available

Molecular Weight
44.11

Molecular Formula
C-H3-C-H2-C-H3

Density
0.116

Weight per Gallon
Not available

Volatility by Volume
Not available

Volatility
Not applicable

Solvent Solubility
Soluble: Absolute alcohol, ether, chloroform, benzene, turpentine

Section 10: Stability and Reactivity

Stability
Stable at normal temperatures and pressure.

Conditions to Avoid
Stable at normal temperatures and pressure.

Incompatible Materials
Oxidizing materials, combustible materials, halogen compounds.

Hazardous Decomposition Products
Oxides of carbon

Possibility of Hazardous Reactions
Will not polymerize.
Section 11: Toxicology Information

Acute Effects

<table>
<thead>
<tr>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Inhalation Gas. Rat &gt;800000 ppm 15 minutes</td>
<td>Not available</td>
<td>Nausea, vomiting, irregular heartbeat, headache, symptoms of drunkenness, disorientation, suffocation, convulsions, coma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eye Irritation</th>
<th>Skin Irritation</th>
<th>Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid: frostbite, blurred vision</td>
<td>Liquid: blisters, frostbite</td>
<td>Central nervous system depression, difficulty breathing</td>
</tr>
</tbody>
</table>

Chronic Effects

- Carcinogenicity: Not available
- Mutagenicity: Not available
- Reproductive Effects: Not available
- Developmental Effects: No data

Section 12: Ecological Information

Fate and Transport

<table>
<thead>
<tr>
<th>Eco toxicity</th>
<th>Persistence / Degradability</th>
<th>Bioaccumulation / Accumulation</th>
<th>Mobility in Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish toxicity: Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Invertebrate toxicity: Not available</td>
<td>Not applicable</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Algal toxicity: Not available</td>
<td>Not applicable</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Phyto toxicity: Not available</td>
<td>Not applicable</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Other toxicity: Not available</td>
<td>Not applicable</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>ID Number</th>
<th>Hazard Class or Division</th>
<th>Packing Group</th>
<th>Labeling Requirements</th>
<th>Passenger Aircraft or Railcar Quantity Limitations</th>
<th>Cargo Aircraft Only Quantity Limitations</th>
<th>Additional Shipping Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>UN1978</td>
<td>2.1</td>
<td>Not applicable</td>
<td>2.1</td>
<td>Forbidden</td>
<td>150 kg</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Canadian Transportation of Dangerous Goods

<table>
<thead>
<tr>
<th>Shipping Name</th>
<th>UN Number</th>
<th>Class</th>
<th>Packing Group / Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>UN1978</td>
<td>2.1</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Section 15: Regulatory Information

U.S. Regulations

<table>
<thead>
<tr>
<th>CERCLA Sections</th>
<th>SARA 355.30</th>
<th>SARA 355.40</th>
<th>SARA 370.21</th>
</tr>
</thead>
</table>
Yes | No | Yes | No | Yes
---|---|---|---|---

SARA 372.65
Not regulated.

OSHA Process Safety
Not regulated.

State Regulations
CA Proposition 65
Not regulated.

Canadian Regulations
WHMIS Classification
A, B1.

National Inventory Status
<table>
<thead>
<tr>
<th>US Inventory (TSCA)</th>
<th>TSCA 12b Export Notification</th>
<th>Canada Inventory (DSL/NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on inventory.</td>
<td>Not listed.</td>
<td>Listed on inventory.</td>
</tr>
</tbody>
</table>

Section 16: Other Information

NFPA Rating
HEALTH=1 FIRE=4 REACTIVITY=0
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard