1 - Product and Company Information

Product Name                  ARGON, 99.998+%
Product Number                295000
Company                       Sigma-Aldrich Korea Ltd.,
                              698-84 Maeng-ri, Wonsam-myun,
                              449-871 Yongin-city, Kyunggi-do,
Technical Phone #             +82-31-329-9000
Fax                           +82-31-329-9090
E-mail Address                sakr@sial.com

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EEC.

3 - Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS #</th>
<th>EC no</th>
<th>Annex I Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARGON</td>
<td>7440-37-1</td>
<td>231-147-0</td>
<td>None</td>
</tr>
</tbody>
</table>

Formula   Ar
Molecular Weight  39.95 AMU
Synonyms       Argon-40 * Argon (ACGIH:OSHA)

4 - First Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT
In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA
Suitable: Use water spray or fog nozzle to keep cylinder cool. Move cylinder away from fire if there is no risk.
SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions. Explosion Hazards: Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area and keep personnel upwind. Shut off leak if there is no risk.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Do not breathe gas. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed. Cylinder temperature should not exceed 125°F (52°C).

SPECIAL REQUIREMENTS: Contents under pressure.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS
Mechanical exhaust required. Safety shower and eye bath.

WORK PRACTICES
Store and use with adequate ventilation.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>BP / BP Range</td>
<td>- 186.0 °C</td>
</tr>
<tr>
<td>MP / MP Range</td>
<td>- 189.0 °C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
</tbody>
</table>
10 - Stability and Reactivity

STABILITY
 Stable: Stable. 
 Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
 Hazardous Decomposition Products: Nature of decomposition products not known.

11 - Toxicological Information

RTECS NUMBER: CF2300000

SIGNS AND SYMPTOMS OF EXPOSURE
 Exposure can cause: Nausea, dizziness, and headache.

ROUTE OF EXPOSURE
 Skin Contact: May cause skin irritation. 
 Skin Absorption: May be harmful if absorbed through the skin. 
 Eye Contact: May cause eye irritation. 
 Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. Can cause rapid suffocation. 
 Ingestion: May be harmful if swallowed.

CONDITIONS AGGRAVATED BY EXPOSURE
 At high concentrations argon functions as a simple asphyxiant by displacing air.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL
 Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

CONTAMINATED CONTAINER DISPOSAL
 Caution: no-return cylinder. Do not reuse. Empty cylinder will contain hazardous residue. Follow proper disposal techniques.

14 - Transport Information

RID/ADR
UN#: 1006
Class: 2.2
Proper Shipping Name: Argon, compressed

IMDG
UN#: 1006
Class: 2.2
Proper Shipping Name: Argon, compressed
Marine Pollutant: No
Severe Marine Pollutant: No

IATA
UN#: 1006
Class: 2.2
Proper Shipping Name: Argon, compressed
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
S-PHRASES: 38
In case of insufficient ventilation, wear suitable respiratory equipment.

Not hazardous according to Directive 67/548/EEC.

COUNTRY SPECIFIC INFORMATION

Germany
WGK: No hazard to waters.
ID-Number: 1348
KBwS-Decision

16 - Other Information

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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