1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ACT CMIK-S
Company : Air Products and Chemicals, Inc
7201 Hamilton Blvd.
Allentown, PA 18195-1501
Telephone : 800-345-3148
Emergency telephone number : 800-523-9374 USA
01-610-481-7711 International

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Concentration (Weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYLACETAMIDE</td>
<td>127-19-5</td>
<td>&gt;= 99%</td>
</tr>
<tr>
<td>2,5,8,11 Tetramethyl 6 dodecyn-5,8 Diol Ethoxylate</td>
<td>169117-72-0</td>
<td>&lt;= 1 %</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
Components of the product may affect the nervous system.

Potential Health Effects

Inhalation : May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure. May cause headache and dizziness.

Skin contact : If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties.

Ingestion : May cause central nervous system effects, such as headache, nausea, vomiting, abdominal pain, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

Chronic Health Hazard : This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Suspect reproductive hazard - contains material which may injure unborn child.

Exposure Guidelines

Target Organs : Kidney.
Liver.
Heart.
Central nervous system.
Eyes.
Skin.
4. FIRST AID MEASURES

General advice: Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes.

Skin contact: Wash with water and soap as a precaution.

Ingestion: Do not induce vomiting. Prevent aspiration of vomit. Turn victim's head to the side.

Inhalation: Move to fresh air.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Dry sand. Limestone powder.

Specific hazards: Incomplete combustion may form carbon monoxide. Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NOx) is to be expected. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Downwind personnel must be evacuated.

Special protective equipment for fire-fighters: Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate personnel to safe areas.

Methods for cleaning up: Place in appropriate chemical waste container.

Additional advice: Evacuate area and do not approach spilled product. If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling: Use personal protective equipment. When using, do not eat, drink or smoke.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection: Not required for properly ventilated areas.
Hand protection: Nitrile rubber.
The breakthrough time of the selected glove(s) must be greater than the intended use period.
Eye protection: Chemical safety glasses.
Skin and body protection: No specific recommendation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid.
Color: Clear.
Odor: Amine-like.
Relative density: 0.9392 (water = 1)
pH: 4.8
Boiling point/range: 266 °F (130 °C)
Melting point/range: < 5 °F (< -15 °C)
Flash point: 140 °F (60 °C)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.
Materials to avoid: Chlorinated solvents.
Hazardous decomposition products: Nitric acid.
Ammonia.
Nitrogen oxides (NOx).
Nitrogen oxide can react with water vapors to form corrosive nitric acid.
Carbon monoxide.
Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Acute Health Hazard

Ingestion: No data is available on the product itself.

Ingestion - Components
DIMETHYLACETAMIDE | LD50 : 4,300 mg/kg | Species : Rat.
2,5,8,11 Tetramethyl 6 dodecyn-5,8 Diol Ethoxylate | LD50 : > 2,000 mg/kg | Species : Rat.

Inhalation : No data is available on the product itself.

Inhalation - Components
DIMETHYLACETAMIDE | LC50 (1 h) : 2475 ppm | Species : Rat.

Skin. : No data is available on the product itself.

Skin. - Components
DIMETHYLACETAMIDE | LD50 : 2,240 mg/kg | Species : Rabbit.
2,5,8,11 Tetramethyl 6 dodecyn-5,8 Diol Ethoxylate | LD50 : > 2,000 mg/kg | Species : Rabbit.

Chronic Health Hazard
N,N-dimethylacetamide has caused embryotoxic and teratogenic effects in laboratory animals. Repeated exposure to levels above the occupational exposure limit produces adverse effects on the liver, kidneys, bone marrow, and the cardiovascular system. Similar effects may be seen following repeated skin exposure.

<table>
<thead>
<tr>
<th>12. ECOLOGICAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity effects</td>
</tr>
<tr>
<td>Aquatic toxicity : No data is available on the product itself.</td>
</tr>
<tr>
<td>Toxicity to other organisms : No data available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility : No data available.</td>
</tr>
<tr>
<td>Bioaccumulation : No data is available on the product itself.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioaccumulation - Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYLACETAMIDE Negligible bioaccumulation potential.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. DISPOSAL CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste from residues / unused products : Contact supplier if guidance is required.</td>
</tr>
<tr>
<td>Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. TRANSPORT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
</tr>
<tr>
<td>Proper shipping name : Combustible liquid, n.o.s. (Dimethylacetamide)</td>
</tr>
<tr>
<td>Class : NON</td>
</tr>
<tr>
<td>UN/ID No. : NA1993</td>
</tr>
<tr>
<td>Packing group : III</td>
</tr>
</tbody>
</table>
IATA

Proper shipping name : Not Dangerous Goods (Dimethylacetamide)
UN/ID No. : UN9999

IMDG

Proper shipping name : Not Dangerous Goods (Dimethylacetamide)
UN/ID No. : UN9999
Packing group : III

TDG

Proper shipping name : Not Dangerous Goods (Dimethylacetamide)
UN/ID No. : UN9999
Packing group : III

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):
DIMETHYLACETAMIDE


<table>
<thead>
<tr>
<th>Country</th>
<th>Regulatory list</th>
<th>Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>TSCA</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>EU</td>
<td>EINECS</td>
<td>Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.</td>
</tr>
<tr>
<td>Canada</td>
<td>DSL</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>Australia</td>
<td>AICS</td>
<td>Not on Inventory. Notifications have been sent to the National Occupational Health and Safety Commission of Australia.</td>
</tr>
<tr>
<td>Japan</td>
<td>ENCS</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>South Korea</td>
<td>ECL</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>China</td>
<td>SEPA</td>
<td>Included on Inventory.</td>
</tr>
<tr>
<td>Philippines</td>
<td>PICCS</td>
<td>Included on Inventory.</td>
</tr>
</tbody>
</table>

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

WHMIS Hazard Classification
Combustible Liquid

16. OTHER INFORMATION

HMIS Rating

Air Products and Chemicals, Inc
Material Safety Data Sheet

Health : 2*
Flammability : 2
Physical hazard : 0

Prepared by : Air Products and Chemicals, Inc. Global EH&S Product Safety Department

For additional information, please visit our Product Stewardship web site at http://www.airproducts.com/productstewardship/