SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: ERA (Environmental Resource Associates)  
ADDRESS: 6000 W. 54th Avenue  
Arvada, CO, 80002 U.S.A.  

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CHEMICAL EMERGENCY PHONE: 352-323-3500 (INFOTRAC)

EMAIL: info@eraqc.com

Product Name(s): Aldehydes & Ketones on Sorbent

Catalog / Part Number(s): 1014, 1014AL1-4, 1114

MSDS Creation Date: July 20, 2007

Revision Date: October 12, 2009

SECTION 2: HAZARDS IDENTIFICATION

Flammable liquid. Harmful. The matrix of the standard is an acetonitrile mixture which is classified as dangerous by Directive 199/45/EC. Use only as directed and in accordance with good laboratory practices.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>EC NUMBER</th>
<th>% BY WT</th>
<th>EXPOSURE LIMITS</th>
<th>EU LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>75-05-8</td>
<td>200-835-2</td>
<td>≤99.9</td>
<td>≤60 ppm</td>
<td>40 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL</td>
</tr>
</tbody>
</table>

Notes: This standard is a mixture of organic chemicals which are present at levels <0.005% in a matrix of acetonitrile packaged in 2 ml flame sealed amber ampoules. Exposure Limits are 8-Hour TWA (Time Weighted Average) unless designated C (Ceiling) or STEL (Short Term Exposure Limit). Other components considered Non-Hazardous under OSHA 1910.1200 (HazCom) as they are not present in concentrations exceeding 1% (or 0.1% if considered a known or potential carcinogen).

Material Use: Analytical reagent or certified reference material used in laboratories. Uses also include research and development.

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove to fresh air.
Skin Contact: Flush with water.
Eye Contact: Immediately flush with water for a minimum of 15 minutes.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek immediate medical attention.

After following first aid measures, seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Flammable Properties: Flammable Liquid. Vapor may travel considerable distance to source of ignition and flash back.
Extinguishing Media: Dry chemical, carbon dioxide or appropriate foam.
Unique Aspects Contributing To a Fire: Burns with a clear, almost invisible flame.
Special Fire Fighting Procedures: Same as for any flammable liquids.

Note: As in any fire, wear self-contained breathing apparatus, and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Shut off all sources of ignition. Ensure adequate ventilation. Wear appropriate personal protective equipment. Absorb with spill pillow or other absorbent and place in closed container for later disposal.

SECTION 7: HANDLING AND STORAGE

Keep container tightly closed. Avoid contact with skin and eyes. Store at 2-6°C. Avoid sources of ignition. Handle in accordance with good laboratory practices. This product is intended for use only by people trained in the safety and handling of chemicals and laboratory preparations.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Handle in accordance with good laboratory practices.
Respiratory Protection: Not normally needed. If exposure limits are exceeded, use approved/certified respirator.
Eye Protection: Splash goggles.
Skin Protection: Neoprene or other chemical resistant gloves. Disposable nitrile are acceptable for light intermittent exposure.
Engineering Controls: Work in a fume hood or use general or other local exhaust ventilation to meet Exposure Limits.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

DATA FOR MATRIX (Data is for Acetonitrile):

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>81.6°C</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Density</td>
<td>1.42</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Hazardous Polymerization: Will Not Occur  _X__  May Occur____  Stability: Stable _X__  Unstable ____

Hazardous Decomposition/Combustion Products: Carbon monoxide, carbon dioxide.
Conditions and Materials to Avoid: Heat, flame, sources of ignition.

SECTION 11: TOXICOLOGICAL INFORMATION

Primary Route(s) of Exposure Under Normal Use: Inhalation, eye contact, absorbed through skin.
Target Organ(s): Respiratory system, eyes, liver, kidney, blood, central nervous system.

Acute Effects: Headache, nausea, dizziness, blurred vision, central nervous system depression, respiratory depression.
Acetonitrile: Oral, rat: LD50 ≥2460 mg/kg; Oral, mouse: LD50 ≤269 mg/kg; Dermal, rabbit: LD50 ≤1250 mg/kg
Chronic Effects: May be toxic to reproductive system male/female.

Other Information: Chemical Ingredient(s) not classified as carcinogen(s) by OSHA, IARC, NTP, ACGIH, or California. Acetonitrile is listed as RTK in Massachusetts, Pennsylvania & New Jersey.

SECTION 12: ECOLOGICAL INFORMATION

Acetonitrile: Dangerous to aquatic life in high concentrations. Etoxicity in water (LC50): 1020 mg/L 96 hours [Fish (Fathead minnow)], 1850 mg/L 96 hours [Fish (bluegill)].

SECTION 13: DISPOSAL CONSIDERATIONS

To determine proper disposal, consult applicable federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

Shipping Name: Acetonitrile, Solution
UN Number: 1648  Shipping/Hazardous Class: 3  Packing Group: II
Shipping regulations are based on combinations of criteria such as quantity, class and packaging according to DOT, IATA and (49) CFR.

Additional information: This product may be shipped as part of chemical kit composed of various compatible dangerous goods for analytical testing purposes. Then this kit would have the following classification: Shipment Name: Chemical Kit  Hazard Class 9  UN Number 3316

SECTION 15: REGULATORY INFORMATION

EU Symbol of Danger: Flammable (F); Harmful (Xn)
EU Risk Phrases: Highly Flammable [R 11]; harmful by inhalation, in contact with skin and if swallowed [R 20/21/22]; Irritating to eyes [R 36].
U.S. TSCA: Constitutes listed
Canada: This product has been classified according to the hazard criteria of the CPR and this MSDS contains all the information required by the CPR.

SECTION 16: OTHER INFORMATION

United States EPA Regulatory Information:
SARA 313: Acetonitrile
CERCLA RQ: 5000 lbs
NFPA Rating: Health: 2  Flammability: 3  Reactivity: 0
HMIS Rating: Health: 2  Flammability: 3  Physical Hazard: 0

NOTE: NA = Data not available, not established, determined or not pertinent.
DISCLAIMER: The information contained herein has been compiled from data presented in various technical sources believed to be accurate. This information is intended to be used only as a guide and does not purport to be complete. ERA makes no warranties and assumes no liability in connection with the use of this information. It is the user’s responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.