1 Identification

- Product identifier
- Trade name: UF-CAL
  - Article number: No other identifiers
- Recommended use and restriction on use
  - Recommended use: Diagnostic Testing
  - Restrictions on use: No further relevant information available.
- Details of the supplier of the Safety Data Sheet
  - Manufacturer/Supplier: SYSMEX AMERICA, Inc
    577 Aptakisic Road
    Lincolnshire, IL 60069 USA
    Phone: 847-996-4500
    1-800-3SYSMEX (1-800-379-7639)
  - Emergency telephone number:
    ChemTel Inc.
    (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

- Classification of the substance or mixture
  The product is not classified as hazardous according to the Globally Harmonized System (GHS).
  - Additional information:
    There are no other hazards not otherwise classified that have been identified.
    0 percent of the mixture consists of ingredient(s) of unknown toxicity.
- Label elements
- GHS label elements
  The product is not classified as hazardous according to OSHA GHS regulations within the United States.
  - Hazard pictograms Not Regulated
  - Signal word Not Regulated
  - Hazard-determining components of labeling: None.
  - Hazard statements Not Regulated
  - Precautionary statements Not Regulated

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>5-10%</td>
</tr>
</tbody>
</table>

(Contd. on page 2)
4 First-aid measures

- **For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.**

<table>
<thead>
<tr>
<th>4 First-aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General information:</strong> No special measures required.</td>
</tr>
<tr>
<td><strong>After inhalation:</strong> Supply fresh air; consult doctor in case of complaints.</td>
</tr>
<tr>
<td><strong>After skin contact:</strong> Immediately rinse with water.</td>
</tr>
<tr>
<td>If skin irritation is experienced, consult a doctor.</td>
</tr>
<tr>
<td><strong>After eye contact:</strong> Remove contact lenses if worn.</td>
</tr>
<tr>
<td>Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.</td>
</tr>
<tr>
<td><strong>After swallowing:</strong> Rinse out mouth and then drink plenty of water.</td>
</tr>
<tr>
<td>Do not induce vomiting; immediately call for medical help.</td>
</tr>
<tr>
<td><strong>Most important symptoms and effects, both acute and delayed</strong></td>
</tr>
<tr>
<td>Headache</td>
</tr>
<tr>
<td>Dizziness</td>
</tr>
<tr>
<td>Gastric or intestinal disorders when ingested.</td>
</tr>
<tr>
<td>Nausea in case of ingestion.</td>
</tr>
<tr>
<td>Disorientation</td>
</tr>
<tr>
<td><strong>Danger:</strong> No further relevant information available.</td>
</tr>
<tr>
<td><strong>Indication of any immediate medical attention and special treatment needed</strong></td>
</tr>
<tr>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

5 Fire-fighting measures

- Extinguishing media |
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. |
- **For safety reasons unsuitable extinguishing agents:** None. |
- **Special hazards arising from the substance or mixture** |
  Formation of toxic gases is possible during heating or in case of fire. |
- **Advice for firefighters** |
- **Protective equipment:** |
  Wear self-contained respiratory protective device. |
  Wear fully protective suit. |
- **Additional information** |
  Use large quantities of foam as it is partially destroyed by the product. |
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Use respiratory protective device against the effects of fumes/dust/aerosol.
  Ensure adequate ventilation.
  Keep away from ignition sources.
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose of the collected material according to regulations.
  Send for recovery or disposal in suitable receptacles.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Prevent formation of aerosols.
    Avoid splashes or spray in enclosed areas.
    Use only in well ventilated areas.
  - Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Avoid storage near extreme heat, ignition sources or open flame.
    Provide ventilation for receptacles.
  - Information about storage in one common storage facility:
    Store away from foodstuffs.
    Store away from oxidizing agents.
  - Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
· Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
</tr>
<tr>
<td>PEL (USA) Long-term value: 1900 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td>REL (USA) Long-term value: 1900 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td>TLV (USA) Short-term value: 1880 mg/m³, 1000 ppm</td>
</tr>
</tbody>
</table>

· Additional information: No further relevant information available.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Do not inhale gases / fumes / aerosols.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
· Engineering controls: No further relevant information available.
· Breathing equipment:
Not required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.
For spills, respiratory protection may be advisable.
· Protection of hands:
Wear protective gloves to handle contents of damaged or leaking units.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· Eye protection:

Safety glasses
· Body protection:
Not required under normal conditions of use.
Protection may be required for spills.
· Limitation and supervision of exposure into the environment No special requirements.
· Risk management measures No special requirements.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
  Form: Liquid

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acc. to OSHA HCS (29 CFR 1910.1200)

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Reviewed on 07/10/2015

Trade name: UF-CAL

(Contd. of page 4)

- Color: Cloudy
- Odor: Aroma
- Odor threshold: Not determined.
- pH-value at 20 °C (68 °F): 4

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.

- Flash point: 39 °C (102 °F)
- Flammability (solid, gaseous): Not applicable.
- Auto-ignition temperature: Not determined.
- Decomposition temperature: Not determined.
- Auto igniting: Product is not self-igniting.
- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Oxidizing properties: Non-oxidizing.
- Vapor pressure: Not determined.
- Density: Not determined.
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.

- Solubility in / Miscibility with
  - Water: Fully miscible.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.

(Contd. on page 6)
Chemical stability
Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.
Possibility of hazardous reactions
Toxic fumes may be released if heated above the decomposition point. Reacts with strong acids and oxidizing agents.
Conditions to avoid Store away from oxidizing agents.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: None.
Primary irritant effect:
on the skin: No irritant effect.
on the eye: Slight irritant effect on eyes.
Sensitization: No sensitizing effects known.
Additional toxicological information:
Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

Carcinogenic categories
IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
NTP (National Toxicology Program)
None of the ingredients is listed.
OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

Probable Routes of Exposure
Ingestion.
Inhalation.
Eye contact.
Skin contact.
Acute effects (acute toxicity, irritation and corrosivity): Vapors have narcotic effect.
Repeated Dose Toxicity: No further relevant information available.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity Based on available data, the classification criteria are not met.
12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
  - **General notes:**
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
  - Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
  - Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
  - The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADN, IMDG, IATA** Not Regulated
- **UN proper shipping name**
- **DOT, ADN, IMDG, IATA** Not Regulated
- **Transport hazard class(es)**
- **DOT, ADN, IMDG, IATA**
- **Class** Not Regulated
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: UF-CAL

Packing group
- DOT, IMDG, IATA: Not Regulated

Environmental hazards:
- Marine pollutant: No
- Special precautions for user: Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

Section 355 (extremely hazardous substances):
None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65 (California)
- Chemicals known to cause cancer:
  Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

| 64-17-5 | ethanol |

- Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

- Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:
  Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

| 64-17-5 | ethanol |

Carcinogenic categories
- EPA (Environmental Protection Agency)
  None of the ingredients is listed.

- IARC (International Agency for Research on Cancer)
  | 64-17-5 | ethanol |
  | 1 |

- TLV (Threshold Limit Value established by ACGIH)
  | 64-17-5 | ethanol |
  | A3 |
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: UF-CAL

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Date of preparation / last revision 07/10/2015 / -

- Abbreviations and acronyms:
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent

- Sources
  SDS Prepared by:
  ChemTel Inc.
  1305 North Florida Avenue
  Tampa, Florida USA 33602-2902
  Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
  Website: www.chemtelinc.com