1 Identification

· Product identifier

· Trade name: Fluorocell WDF

· 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
  Flam. Liq. 4  H227  Flammable liquid.
  Acute Tox. 4  H302  Harmful if swallowed.
  Acute Tox. 4  H312  Harmful in contact with skin.
  Acute Tox. 4  H332  Harmful if inhaled.
  STOT SE 2  H371  May cause damage to organs.
  STOT RE 2  H373  May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

· 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 classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

GHS07 GHS08

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Safety Data Sheet  
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: Fluorocell WDF

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  - ethanediol
  - methanol

- **Hazard statements**
  - H227 Combustible liquid.
  - H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
  - H371 May cause damage to organs.
  - H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

- **Precautionary statements**
  - P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.
  - P261 Avoid breathing mist, vapors, or spray.
  - P280 Wear protective gloves/protective clothing/eye protection.
  - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P321 Specific treatment (see on this label).
  - P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
  - P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P370+P381 In case of fire: Use for extinction: CO2, powder or water spray.
  - P362+P364 Take off contaminated clothing and wash it before reuse.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

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

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-21-1 ethanediol</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
</tr>
</tbody>
</table>

- **Additional information:**
  For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

(Contd. on page 3)
4 First-aid measures

· Description of first aid measures

· General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact:
  Immediately rinse with water.
  If skin irritation continues, consult a doctor.

· After eye contact:
  Protect unharmed eye.
  Remove contact lenses if worn, if possible.
  Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:
  Rinse out mouth and then drink plenty of water.
  Do not induce vomiting; immediately call for medical help.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed
  Headache
  Breathing difficulty
  Coughing
  Dizziness
  Thirst
  Acidosis
  Nausea
  Gastric or intestinal disorders when ingested.
  Vision disorders.
  Disorientation
  Unconsciousness

· Danger
  Danger of impaired breathing.
  Danger of pulmonary edema.
  Danger of cerebral edema.
  Danger of pneumonia.
  May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
  Harmful if swallowed.
  Harmful in contact with skin.
  Harmful if inhaled.

· Indication of any immediate medical attention and special treatment needed
  Contains ethylene glycol and methanol. Consult literature for specific antidotes.
  Later observation for pneumonia and pulmonary edema.
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Trade name: Fluorocell WDF

If necessary oxygen respiration treatment.
Medical supervision for at least 48 hours.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  - Alcohol resistant foam
  - Water fog / haze
  - Water spray
  - Carbon dioxide
  - Gaseous extinguishing agents
  - Fire-extinguishing powder
- 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
  - Eliminate all ignition sources if safe to do so.
  - Cool endangered receptacles with water spray.
  - Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Ensure adequate ventilation.
  - For large spills, wear protective clothing.
  - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
  - Particular danger of slipping on leaked/spilled product.
  - Keep away from ignition sources.
- Environmental precautions:
  - Do not allow to enter sewers/ surface or ground water.
  - Inform respective authorities in case of seepage into water course or sewage system.
- Methods and material for containment and cleaning up:
  - Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
  - Dispose contaminated material as waste according to item 13.
  - 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.

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Safety Data Sheet
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Trade name: Fluorocell WDF

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:
  Combustible liquid.
  Keep ignition sources away - Do not smoke.
- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles:
  Store in a well-ventilated place. Keep cool.
  Avoid storage near extreme heat, ignition sources or open flame.
- Information about storage in one common storage facility:
  Store away from foodstuffs.
  Store away from oxidizing agents.
- Further information about storage conditions: Protect from heat and direct sunlight.
- 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

  Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-21-1 ethanediol</td>
<td>Long-term value: NIC-10* mg/m³ Ceiling limit value: (100) mg/m³ (H);*as inhalable fraction and vapor</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
<td>Long-term value: 260 mg/m³, 200 ppm Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI</td>
</tr>
</tbody>
</table>

(Contd. on page 6)
Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>BEI (USA)</th>
<th>Medium</th>
<th>Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1 methanol</td>
<td>15 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Methanol (background, nonspecific)</td>
</tr>
</tbody>
</table>

Additional information: The lists that were valid during the creation were used as basis.

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.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

Engineering controls: No further relevant information available.

Breathing equipment:

- Use suitable respiratory protective device when aerosol or mist is formed.
- Use suitable respiratory protective device when high concentrations are present.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment: Avoid release to the environment.

Risk management measures: See Section 7 for additional information.
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - Form: Liquid
    - Color: Blue
  - Odor: Odorless
  - Odor threshold: Not determined.
  - **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.
- **Flash point:** 63 °C (145 °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:** Not determined.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.09 g/cm³ (9.096 lbs/gal)
- **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.
10 Stability and reactivity

- Reactivity
  - Chemical stability
  - Thermal decomposition / conditions to be avoided:
    Keep away from heat, sparks, open flames, and hot surfaces. - No smoking.
  - Possibility of hazardous reactions
    Toxic fumes may be released if heated above the decomposition point.
    Reacts with strong acids.
    Reacts with strong oxidizing agents.
    Used empty containers may contain product gases which form explosive mixtures with air.
    Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- Conditions to avoid
  - Keep ignition sources away - Do not smoke.
  - 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:

<table>
<thead>
<tr>
<th>LD/LC50 values that are relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-21-1 ethanediol</td>
</tr>
<tr>
<td>Oral LD50 5840 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 9530 mg/kg (rabbit)</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
</tr>
<tr>
<td>Oral LD50 5628 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 15800 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative LC50/4h 130.7 mg/l (RAT)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Slight irritant effect on skin and mucous membranes.
  - on the eye: Slight irritant effect on eyes.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
  - Harmful
  - Toxic and/or corrosive effects may be delayed up to 24 hours.
  - The product shows the following dangers according to internally approved calculation methods for preparations:
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
- Inhalation.
- Eye contact.
- Skin contact.
- Ingestion.

### Acute effects (acute toxicity, irritation and corrosivity):
- Harmful if swallowed, in contact with skin or if inhaled.
- May cause damage to organs.

### Repeated Dose Toxicity:
- May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

## 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.
  Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.
  Water hazard class 1 (Self-assessment): slightly hazardous for water
- **Other adverse effects**: No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
  Contact waste processors for recycling information.
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. Residual materials should be treated as hazardous.

· Uncleaned packagings:
- **Recommendation**: Disposal must be made according to official regulations.

### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>Not Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, ADN, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>DOT, ADN, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>DOT, ADN, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Marine pollutant:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

### 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):**
      All ingredients are listed.
    - **TSCA (Toxic Substances Control Act):**
      All ingredients are listed.
    - **Proposition 65 (California)**
    - **Chemicals known to cause cancer:**
      None of the ingredients are listed.
    - **Chemicals known to cause reproductive toxicity for females:**
      None of the ingredients are listed.

(Contd. on page 11)
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: Fluorocell WDF

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

· Chemicals known to cause developmental toxicity:
  67-56-1 methanol

· Carcinogenic categories
  · EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  · IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  · TLV (Threshold Limit Value established by ACGIH)
    107-21-1 ethanediol A4
  · NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

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 05/11/2015

· 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)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  Flam. Liq. 4: Flammable liquids, Hazard Category 4
  Acute Tox. 4: Acute toxicity, Hazard Category 4
  STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2
  STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· Sources
  SDS Prepared by:
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  Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
  Website: www.chemtelinc.com