1 Identification

- Product identifier
  - Trade name: UF II SEARCH-SED
  - Article number: No other identifiers.
  - CAS Number: 107-21-1
  - EC number: 203-473-3
  - Index number: 603-027-00-1

- 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
  Acute Tox. 4 H302 Harmful if swallowed.

- 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 substance is classified and labeled according to the Globally Harmonized System (GHS).

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

Trade name: UF II SEARCH-SED

Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labeling:
ethanediol

Hazard statements
H302 Harmful if swallowed.

Precautionary statements
P260 Do not breathe mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P314 Get medical advice/attention if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:

HMIS-ratings (scale 0 - 4) * Indicates a long term health hazard from repeated or prolonged exposures.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
107-21-1 ethanediol
Identification number(s)
EC number: 203-473-3
Index number: 603-027-00-1

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.
Take affected persons out into the fresh air.
Trade name: UF II SEARCH-SED

- **After inhalation:**
  Supply fresh air; consult doctor in case of complaints.
  Provide oxygen treatment if affected person has difficulty breathing.

- **After skin contact:**
  Immediately remove any clothing soiled by the product.
  Immediately wash with water and soap and rinse thoroughly.
  If skin irritation is experienced, consult a doctor.

- **After eye contact:**
  Remove contact lenses if worn.
  Rinse opened eye for several minutes under running water. If symptoms persist, 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
    Coughing
    Dizziness
    Acidosis
    Cramp
    Gastric or intestinal disorders when ingested.
    Nausea in case of ingestion.
    Disorientation
  - **Danger**
    Harmful if swallowed.
    May cause drowsiness or dizziness.
    May cause damage to organs.

- **Indication of any immediate medical attention and special treatment needed**
  Medical supervision for at least 48 hours.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

Trade name: UF II SEARCH-SED

- Advice for firefighters
  - Protective equipment:
    Wear self-contained respiratory protective device.
    Wear fully protective suit.
  - Additional information
    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.
  Wear protective equipment. Keep unprotected persons away.
  For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- 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 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.
See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Prevent formation of aerosols.
    Use only in well ventilated areas.
    Avoid splashes or spray in enclosed areas.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
  - Storage: 2 – 35 °C
- Requirements to be met by storerooms and receptacles:
  Provide ventilation for receptacles.
  Avoid storage near extreme heat, ignition sources or open flame.
- Information about storage in one common storage facility:
  Store away from foodstuffs.

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Trade name: UF II SEARCH-SED

- Do not store together with oxidizing and acidic materials.
- **Further information about storage conditions:** None.
- **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><strong>107-21-1 ethanediol</strong></td>
</tr>
<tr>
<td><strong>TLV (USA)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>(H)</strong>;*as inhalable fraction and vapor</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.
    - Immediately remove all soiled and contaminated clothing.
    - Do not inhale gases / fumes / aerosols.
    - Avoid contact with the eyes and skin.
  - **Engineering controls:** No further relevant information available.
  - **Breathing equipment:**
    - Not required under normal conditions of use.
    - Use suitable respiratory protective device when high concentrations are present.
    - Use suitable respiratory protective device when aerosol or mist is formed.
    - For spills, respiratory protection may be advisable.
  - **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

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- **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.

- **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.

- **For the permanent contact gloves made of the following materials are suitable:**
  - PVC gloves
  - Neoprene gloves
  - Nitrile rubber, NBR

- **Eye protection:**
  Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment** No further relevant information available.

- **Risk management measures**
  See Section 7 for additional information.
  No further relevant information available.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - **Form:** Viscous liquid.
    - **Color:** Blue
  - **Odor:** Mild
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/Melting range:** -12 °C (10 °F)
    - **Boiling point/Boiling range:** 198 °C (388 °F)
  - **Flash point:** 128 °C (262 °F)
  - **Flammability (solid, gaseous):** Not applicable.
  - **Auto-ignition temperature:** 410 °C (770 °F)
Trade name: UF II SEARCH-SED

- Decomposition temperature: Not determined.
- Auto igniting: Not determined.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: 1.8%
  - Upper: 12.8%
- Vapor pressure: Not determined.
- Density at 20 °C (68 °F): 1.11 g/cm³ (9.263 lbs/gal)
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate at 20 °C (68 °F): 0.01
- Solubility in / Miscibility with Water: Soluble.
- 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
- Chemical stability
- Thermal decomposition / conditions to be avoided:
  No decomposition if used and stored according to specifications.
- Possibility of hazardous reactions
  Reacts with strong acids and alkali.
  Reacts with strong oxidizing agents.
  Toxic fumes may be released if heated above the decomposition point.
  Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
- 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:
      - 107-21-1 ethanediol
        - Oral LD50: 5840 mg/kg (rat)
        - Dermal LD50: 9530 mg/kg (rabbit)

- 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.

- Subacute to chronic toxicity:
  - May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

- Additional toxicological information: Toxic and/or corrosive effects may be delayed up to 24 hours.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - Substance is not listed.
  - NTP (National Toxicology Program)
    - Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - Substance is not listed.

- Probable Routes of Exposure
  - Inhalation.
  - Eye contact.
  - Skin contact.

- Acute effects (acute toxicity, irritation and corrosivity):
  - Harmful if swallowed. Vapors have narcotic effect. 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:**
      - Water hazard class 1 (Assessment by list): slightly hazardous for water
      - 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:**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
    - 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.
    - 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.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
  - DOT, ADN, IMDG, IATA: Not Regulated
  - UN proper shipping name: Not Regulated
  - DOT, ADN, IMDG, IATA: Not Regulated
  - Transport hazard class(es)
  - DOT, ADN, IMDG, IATA: Not Regulated
  - Class: Not Regulated

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Trade name: UF II SEARCH-SED

- 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): Substance is not listed.
      - Section 313 (Specific toxic chemical listings): Substance is listed.
      - TSCA (Toxic Substances Control Act): Substance is listed.

- Proposition 65 (California)
  - Chemicals known to cause cancer: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for females: Substance is not listed.
  - Chemicals known to cause reproductive toxicity for males: Substance is not listed.
  - Chemicals known to cause developmental toxicity: Substance is not listed.

- Carcinogenic categories
  - EPA (Environmental Protection Agency) Substance is not listed.
  - IARC (International Agency for Research on Cancer) Substance is not listed.
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

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· TLV (Threshold Limit Value established by ACGIH)
  107-21-1 ethanediol A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)
  Substance is not 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 04/20/2015

· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  Acute Tox. 4: Acute toxicity, Hazard Category 4
  STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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UF II SEARCH-SED

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