1 Identification

· Product identifier
· Trade name: URINOSEARCH DYE
· 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
  · Acute Tox. 4 H302 Harmful if swallowed.
  · Acute Tox. 3 H331 Toxic if inhaled.
  · Muta. 2 H341 Suspected of causing genetic defects.
  · 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

· Signal word
  Warning

(Contd. on page 2)
Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Trade name: URINOSEARCH DYE

- Hazard-determining components of labeling:
  ethanediol
  ethidium bromide

- Hazard statements
  H302 Harmful if swallowed.
  H330 Fatal if inhaled.
  H341 Suspected of causing genetic defects.
  H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

- Precautionary statements
  P260 Do not breathe mist/vapors/spray.
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves/protective clothing/eye protection.
  P270 Do not eat, drink or smoke when using this product.
  P271 Use only outdoors or in a well-ventilated area.
  P201 Obtain special instructions before use.
  P202 Do not handle until all safety precautions have been read and understood.
  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.
  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.

3 Composition/information on ingredients

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

- Dangerous components:
  107-21-1 ethanediol <100%
  1239-45-8 ethidium bromide <.50%

- Additional information:
  For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.
  For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  Remove breathing apparatus only after contaminated clothing have been completely removed.

(Contd. on page 3)
Trade name: URINOSEARCH DYE

- **After inhalation:**
  Supply fresh air or oxygen; call for doctor.
  Provide oxygen treatment if affected person has difficulty breathing.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
  Do not use mouth to mouth or mouth to nose resuscitation.
  In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**
  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, 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
  Thirst
  Acidosis
  Nausea
  Gastric or intestinal disorders
  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.
  Suspected of causing genetic defects.

  **Indication of any immediate medical attention and special treatment needed**
  Medical supervision for at least 48 hours.
  Later observation for pneumonia and pulmonary edema.
  If necessary oxygen respiration treatment.
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.
- 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 fog.

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.
  Particular danger of slipping on leaked/spilled product.
- 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.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  Use only in well ventilated areas.
  Prevent formation of aerosols.
  Avoid splashes or spray in enclosed areas.
Trade name: URINOSEARCH DYE

- Information about protection against explosions and fires:
  - Keep ignition sources away - Do not smoke.
  - Keep respiratory protective device available.

- 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.
  - Further information about storage conditions: Keep receptacle tightly sealed.
  - 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>107-21-1 ethanediol</td>
</tr>
<tr>
<td>TLV (USA)</td>
</tr>
<tr>
<td>Ceiling limit value: (100) mg/m³</td>
</tr>
<tr>
<td>(H);*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.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
    - Do not inhale gases / fumes / aerosols.
    - Avoid contact with the eyes and skin.
  - Engineering controls: No further relevant information available.
  - Breathing equipment:
    - Suitable respiratory protective device recommended.
    - NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

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Trade name: URINOSEARCH DYE

- Protection of hands:
  - Protective gloves

Rubber 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
  - Nitrile rubber, NBR
  - Neoprene gloves
  - PVC 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: Red
  - Odor: Odorless
  - Odor threshold: Not determined.
  - pH-value: Not determined.

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 197 °C (387 °F)
  - Flash point: 111 °C (232 °F)
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 alkali.
  Reacts with strong oxidizing agents.
· Conditions to avoid
  Keep ignition sources away - Do not smoke.
  Store away from oxidizing agents.
  Avoid acids.
· Incompatible materials: No further relevant information available.
11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

  - LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral LD50 mg/kg (rat)</th>
<th>Dermal LD50 mg/kg (rabbit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-21-1 ethanediol</td>
<td>5840 mg/kg</td>
<td>9530 mg/kg</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:
  - Toxic
  - 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.

(Contd. of page 7)
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 product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.
  - **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.
    - Hand over to hazardous waste disposers.
    - 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

- **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
  - **Packing group** Not Regulated
  - **DOT, IMDG, IATA** Not Regulated
Trade name: URINOSEARCH DYE

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):
      107-21-1 ethanediol
    - 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.
    - Chemicals known to cause reproductive toxicity for males:
      None of the ingredients is listed.
    - Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.
  - 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.

(Contd. of page 9)
Trade name: URINOSEARCH DYE

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:
  - 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
  - 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
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Acute Tox. 3: Acute toxicity, Hazard Category 3
  - Muta. 2: Germ cell mutagenicity, Hazard Category 2
  - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

- Sources
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