Material Safety Data Sheet
acc. to ISO 11014

Printing date 02/28/2017
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### 1 Identification

- **Product identifier**
  - **Trade name:** Ultima Gold Radioactive LSC Standards
  - **Product number:** 6007600, 6007601, 6007602, 6007603, 6007604, 6007605, 6010704, 6010705, 6010706
  - **Application of the substance / the mixture** Laboratory chemicals

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** PerkinElmer Inc
    549 Albany st
    Boston, MA 02118
  - **Information department:**
    US Technical Support
    800-762-4000
  - **Emergency telephone number:**
    If inside USA, call CHEMTREC at 1-800-424-9300
    If outside USA, call CHEMTREC at 1-703-527-3887

### 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Skin Irrit. 2** H315 Causes skin irritation.
  - **Eye Dam. 1** H318 Causes serious eye damage.
  - **Asp. Tox. 1** H304 May be fatal if swallowed and enters airways.
  - **Aquatic Acute 2** H401 Toxic to aquatic life.
  - **Aquatic Chronic 1** H410 Very toxic to aquatic life with long lasting effects.

- **Additional information:** For the wording of the listed H phrases refer to section 16.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**

  ![GHS05](image1)  ![GHS08](image2)  ![GHS09](image3)

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - 2-Ethylhexyl phosphate diethanolamine salt
  - Diisopropyl Naphthalene Isomers

- **Hazard statements**
  - Causes skin irritation.
  - Causes serious eye damage.
  - May be fatal if swallowed and enters airways.
  - Toxic to aquatic life.
  - Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**
  - Wear protective gloves / eye protection / face protection.
  - Avoid release to the environment.
  - IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
  - IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
4 First-aid measures

- **Description of first aid measures**
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:** If symptoms persist consult doctor.
  - **Information for doctor:**
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
Trade name: Ultima Gold Radioactive LSC Standards

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.
  Ensure adequate ventilation.

- **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.

- **Protective Action Criteria for Chemicals**

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<th>PAC-1:</th>
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<tr>
<td>38640-62-9</td>
<td>Diisopropyl Naphthalene Isomers</td>
<td>5.6 mg/m3</td>
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<td>9016-45-9</td>
<td>Renex 678</td>
<td>43 mg/m3</td>
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<td>13280-61-0</td>
<td>1,4-bis(4-methyl-alpha-styryl)benzene</td>
<td>12 mg/m3</td>
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<td>92-71-7</td>
<td>2,5-diphenyloxazole</td>
<td>25 mg/m3</td>
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<tr>
<td>78-40-0</td>
<td>triethyl phosphate</td>
<td>23 mg/m3</td>
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<tr>
<td>577-11-7</td>
<td>Sodium dioctyl sulphosuccinate</td>
<td>5.7 mg/m3</td>
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<td>Diisopropyl Naphthalene Isomers</td>
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<td>Renex 678</td>
<td>470 mg/m3</td>
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<td>577-11-7</td>
<td>Sodium dioctyl sulphosuccinate</td>
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<td>92-71-7</td>
<td>2,5-diphenyloxazole</td>
<td>160 mg/m3</td>
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<td>78-40-0</td>
<td>triethyl phosphate</td>
<td>320 mg/m3</td>
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<tr>
<td>577-11-7</td>
<td>Sodium dioctyl sulphosuccinate</td>
<td>380 mg/m3</td>
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**7 Handling and storage**

- **Handling:**
  - **Precautions for safe handling**
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**
  - **Requirements to be met by storerooms and containers:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **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

- Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Exposure controls
- Personal protective equipment:

- General protective and hygienic measures:
  Keep away from food and beverages.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
  Avoid contact with the skin.
  Avoid contact with the eyes and skin.

- Respiratory protection:
  In case of brief or low exposure use an approved cartridge filter. In case of intensive or longer exposure use SCBA.
  Suitable respiratory protective device recommended.

- 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:
  
  ![Tightly sealed goggles]

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:
  Form: Fluid
  Color: According to product specification
  Odor: Characteristic
  Odor threshold: Not determined.

- pH-value: N/A
### 44.1.4 Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.
- **Flash point:** 260 °C (500 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 383 °C (721 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure:** Not determined.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- **Solvent content:**
  - Organic solvents: 0.5 %
  - VOC content: 0.5 %
- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      | 38640-62-9 Diisopropyl Naphthalene Isomers |
      | Oral LD50 | 3900 mg/kg (rat) |
      | Dermal LD50 | 4500 mg/kg (rat) |
      | Inhalative LC50/4 h | 5.64 mg/l (rat) |
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Strong irritant with the danger of severe eye injury.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    Irritant
- 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.

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.
  - Ecotoxicity effects: N/A
  - Remark: Very toxic for fish
  - Other information: N/A
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must be specially treated adhering to official regulations.
14 Transport information

- **UN-Number**
  - ADR, IMDG, IATA: UN2810
- **ADR, IMDG**
  - ADN: Not Regulated
- **UN proper shipping name**
  - ADR: 2810 Toxic, liquids, organic, n.o.s., ENVIRONMENTALLY HAZARDOUS
  - ADN: Not Regulated
  - IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (Diisopropyl Naphthalene Isomers, Renex 678), MARINE POLLUTANT
  - IATA: TOXIC LIQUID, ORGANIC, N.O.S.
- **Transport hazard class(es)**
  - ADR, IMDG
    - Class: 6.1 Toxic substances
    - Label: 6.1
    - ADN/R Class: Not Regulated
  - IATA
    - Class: 6.1 Toxic substances
    - Label: 6.1
- **Packing group**
  - ADR, IMDG, IATA: III
- **Environmental hazards:**
  - Product contains environmentally hazardous substances: Diisopropyl Naphthalene Isomers
- **Marine pollutant:**
  - Symbol (fish and tree)
- **Special marking (ADR):**
  - Symbol (fish and tree)
- **Special precautions for user**
  - Warning: Toxic substances
  - Danger code (Kemler): 60
  - EMS Number: F-A,S-A
  - Stowage Category: A
  - Stowage Code: SW2 Clear of living quarters.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.
44.1.4  
· Transport/Additional information:  
· Quantity limitations  
  On passenger aircraft/rail: 60 L  
  On cargo aircraft only: 220 L
· ADR  
  · Excepted quantities (EQ)  
    Code: E1  
    Maximum net quantity per inner packaging: 30 ml  
    Maximum net quantity per outer packaging: 1000 ml
· IMDG  
  · Limited quantities (LQ)  
    5L  
  · Excepted quantities (EQ)  
    Code: E1  
    Maximum net quantity per inner packaging: 30 ml  
    Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":  
  UN 2810 TOXIC, LIQUIDS, ORGANIC, N.O.S., 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara  
  · Section 355 (extremely hazardous substances):  
    None of the ingredients is listed.
  · Section 313 (Specific toxic chemical listings):  
    None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):  
  All ingredients are listed.
· Proposition 65  
  · Chemicals known to cause cancer:  
    None of the ingredients is listed.
  · Chemicals known to cause reproductive toxicity for females:  
    None of the ingredients is 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.
  · TLV (Threshold Limit Value established by ACGIH)  
    None of the ingredients is listed.
  · NIOSH-Ca (National Institute for Occupational Safety and Health)  
    None of the ingredients is listed.
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
16 Other information

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer, Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

· Date of preparation / last revision 02/28/2017 / -

· 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)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1