1 Identification

- Product identifier
- **Trade name:** MSD GOLD SULFO-TAG NHS-ESTER
- **Article number:** R91AO-1, R91AO-2
- **Application of the substance / the mixture** Laboratory chemicals

- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** MESO SCALE DIAGNOSTICS LLC.
  1601 Research Blvd.
  Rockville, MD 20850-3173
  +1-240-314-2600
  Fax: +1-301-990-2776

- **Information department:** Safety Office
- **Emergency telephone number:**
  CHEMTREC (24 hours Emergency line)
  Within the U.S.: 800-424-9300
  International: +1-703-527-3887 (call collect)

2 Hazard(s) identification

- **Classification of the substance or mixture**
  
  ![GHS06 Skull and crossbones](image)

  Acute Tox. 3 **H301** Toxic if swallowed.
  Acute Tox. 3 **H311** Toxic in contact with skin.

  ![GHS07](image)

  Acute Tox. 4 **H332** Harmful if inhaled.

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

- **Hazard pictograms**
  
  ![GHS06](image)

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  MSD Sulfo-TAG

- **Hazard statements**
  H301+H311 Toxic if swallowed or in contact with skin.
H332 Harmful if inhaled.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves / protective clothing.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a poison center/doctor if you feel unwell.
P330 Rinse mouth.
P302+P352 If on skin: Wash with plenty of water.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**

- Health = 3
- Fire = 0
- Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

- HEALTH 2 Health = 2
- FIRE 0 Fire = 0
- REACTIVITY 0 Reactivity = 0

**Other hazards**

**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
  - MSD Sulfo-TAG
- **Identification number(s) R32**

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### 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.
- **After inhalation:**
  - Supply fresh air or oxygen; call for doctor.
  - In case of unconsciousness place patient stably in side position for transportation.
  - Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
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After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Immediately call a 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:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture: No further relevant information available.
Advice for firefighters
Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Not required.
Environmental precautions: Do not allow to enter sewers/surface or ground water.
Methods and material for containment and cleaning up:
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.

7 Handling and storage

Handling:
Precautions for safe handling
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
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 receptacles: No special requirements.
Information about storage in one common storage facility:
Do not store together with oxidizing and acidic materials.
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
Components with limit values that require monitoring at the workplace: Not required.
9 Physical and chemical properties

· Information on basic physical and chemical properties
  · General Information
  · Appearance:
    - Form: Solid
    - Color: Orange
    - Odor: Odorless
    - Odour threshold: Not determined.
  · pH-value: Not applicable.

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

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Ignition temperature:
  - Decomposition temperature: Not determined.
  - Auto igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.
10 Stability and reactivity

- Reactivity
- 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:

<table>
<thead>
<tr>
<th>MSD Sulfo-TAG</th>
<th>Oral LD50</th>
<th>100 mg/kg (ATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal LD50</td>
<td>300 mg/kg (ATE)</td>
<td></td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td>1.5 mg/l (ATE)</td>
<td></td>
</tr>
</tbody>
</table>

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

- Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>
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 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - **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 not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - **ADR** UN3288
- **UN proper shipping name**
  - **ADR** 3288 Toxic solid, inorganic, n.o.s.
- **Transport hazard class(es)**
  - **ADR**
    - **Class** 6.1 Toxic substances
  - **Packing group**
    - **ADR** III
- **Environmental hazards:**
  - **Marine pollutant:** No
  - **Special precautions for user** Warning: Toxic substances
Trade name: MSD GOLD SULFO-TAG NHS-ESTER

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

· Transport/Additional information:
  · ADR
  · Excepted quantities (EQ) Code: E1
    Maximum net quantity per inner packaging: 30 g
    Maximum net quantity per outer packaging: 1000 g
  · UN "Model Regulation": UN3288, Toxic solid, inorganic, n.o.s., 6.1, III

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Sara
  · Section 355 (extremely hazardous substances):
    Substance is not listed.
  · Section 313 (Specific toxic chemical listings):
    Substance is not listed.
  · TSCA (Toxic Substances Control Act):
    Substance is not listed.
  · Proposition 65
    · 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.
  · TLV (Threshold Limit Value established by ACGIH)
    Substance is not listed.
  · NIOSH-Ca (National Institute for Occupational Safety and Health)
    Substance is not listed.
  · GHS label elements
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    GHS06
Trade name: MSD GOLD SULFO-TAG NHS-ESTER

· Signal word Danger

· Hazard-determining components of labeling:
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  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

· Department issuing SDS: Safety Office
· Contact: Safety Officer
· Date of preparation / last revision 06/09/2015 / -

· 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)
  ACGIH: American Conference of Governmental Industrial Hygienists
  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. 3: Acute toxicity, Hazard Category 3
  Acute Tox. 4: Acute toxicity, Hazard Category 4