1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: HaloTag® Alexa Fluor® 660 Ligand

Article number: G8472

Application of the substance / the preparation: Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: MSDS author: Regulatory.Affairs@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description
HaloTag Alexa Fluor 660

3 Hazards identification

Classification of the substance or mixture

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

\[\text{Harmful}\]

Harmful in contact with skin and if swallowed.

\[\text{Irritant}\]

Irritating to skin. Risk of serious damage to eyes.

Information concerning particular hazards for human and environment: Not applicable.

Classification system:
The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

Label elements

Labelling according to EU guidelines:
The product has been classified and marked in accordance with directives on hazardous materials.
Trade name: HaloTag® Alexa Fluor® 660 Ligand

- Code letter and hazard designation of product: Xn Harmful
- Risk phrases: Harmful in contact with skin and if swallowed. Irritating to skin. Risk of serious damage to eyes.
- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0
- OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
  - Toxic
  - Irritant
- Primary route(s) of entry: Dermal, Oral
- Target Organ(s): Not applicable or unknown

4 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. Medical supervision for at least 48 hours.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: Seek immediate medical advice.

5 Firefighting measures

- 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: None known

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Wear protective clothing.
- 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.
7 Handling and storage

Handling:
Precautions for safe handling: Keep receptacles tightly sealed.
Information about protection against explosions and fires: The product is not flammable.

Storage:
Requirements to be met by storerooms and receptacles: 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

Components with limit values that require monitoring at the workplace: Not required.
Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
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.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.

Breathing equipment: Not required.

Protection of hands:
Protective gloves: 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.
Eye protection: Tightly sealed goggles

9 Physical and chemical properties

General Information
Appearance:
Form: Fluid
Color: Colorless
Odor: Characteristic
Odour threshold: Not determined.

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

Flash point: Not applicable.
10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:**

Strong irritant with the danger of severe eye injury.

**Irritating effect.**

**Sensitization:** No sensitizing effects known.

12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

(Contd. on page 5)
Trade name: HaloTag® Alexa Fluor® 660 Ligand

Ecotoxical effects:
Remark: Not 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.

13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

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

14 Transport information

<table>
<thead>
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<tr>
<td>UN proper shipping name</td>
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<td>Transport hazard class(es)</td>
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<td>Marine pollutant:</td>
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<tr>
<td>Special precautions for user</td>
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<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

15 Regulatory information

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.

### Cancerogenity categories

**EPA (Environmental Protection Agency)**
Substance is not listed.

**IARC (International Agency for Research on Cancer)**
Substance is not listed.

**NTP (National Toxicology Program)**
Substance is not listed.

**TLV (Threshold Limit Value established by ACGIH)**
Substance is not listed.

**MAK (German Maximum Workplace Concentration)**
Substance is not listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**
Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**
Substance is not listed.

### Product related hazard informations:
The product has been classified and marked in accordance with directives on hazardous materials.

**Hazard symbols:**
Xn Harmful

**Risk phrases:**
Harmful in contact with skin and if swallowed.
Irritating to skin.
Risk of serious damage to eyes.

**National regulations:**

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

### 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 MSDS:**
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330