1. PRODUCT AND COMPANY IDENTIFICATION

Product name  Harringtonine
UN/ID No  1544
Recommended use  For research use only

Supplier Address  Abcam Inc
                     1 Kendall Square, Ste 341
                     Cambridge, MA 02139-1517
                     USA
                     Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
                     Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address  technical@abcam.com

Emergency telephone  Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>1</td>
</tr>
<tr>
<td>Acute inhalation toxicity - dust/mist</td>
<td>2</td>
</tr>
<tr>
<td>Ozone</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Danger

Hazard statements
H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H330 - Fatal if inhaled
Precautionary Statements - EU (§28, 1272/2008)
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P280 - Wear protective gloves/eye protection/face protection
P284 - Wear respiratory protection
P330 - Rinse mouth
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P405 - Store locked up
P501 - Dispose of contents/container to an approved waste disposal plant
P262 - Do not get in eyes, on skin, or on clothing
P361 - Remove/Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P271 - Use only outdoors or in a well-ventilated area
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Other information
Caution - substance not yet tested completely

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

For the full text of the H-Statements mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

<table>
<thead>
<tr>
<th>Description</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>General advice</td>
<td>Immediate medical attention is required.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Immediate medical attention is required. Move to fresh air. Artificial respiration and/or oxygen may be necessary.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.</td>
</tr>
<tr>
<td>Notes to physician</td>
<td>Treat symptomatically.</td>
</tr>
<tr>
<td>Protection of first-aiders</td>
<td>Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.</td>
</tr>
</tbody>
</table>

### 5. FIRE-FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Description</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable properties</td>
<td>Not flammable.</td>
</tr>
</tbody>
</table>
Flash point: not determined

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data:
- Sensitivity to Static Discharge: none.

Protective equipment and precautions for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation.

Environmental precautions: Try to prevent the material from entering drains or water courses.

Methods for containment: Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Pick up and transfer to properly labeled containers.

Other information: Refer to protective measures listed in sections 7 and 8.

7. HANDLING AND STORAGE

Advice on safe handling: Handle in accordance with good industrial hygiene and safety practice.

Technical measures/Storage conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures:
- Showers
- Eyewash stations
- Ventilation systems

Personal protective equipment:
- Eye/face protection: No special protective equipment required.
- Skin and body protection: No special protective equipment required.
- Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures: Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>Solid</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Stabilty</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Incompatible products</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NOx).</td>
</tr>
<tr>
<td>Hazardous polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

- Stability
  - Stable under recommended storage conditions.
- Incompatible products
  - None known based on information supplied.
- Conditions to avoid
  - None known based on information supplied.
- Hazardous decomposition products
  - Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NOx).
- Hazardous polymerization
  - Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- Product Information
  - Very toxic in contact with skin and if swallowed.
- Inhalation
  - Very toxic by inhalation
- Skin contact
  - Avoid contact with skin. Very toxic in contact with skin.
- Ingestion
  - Very toxic if swallowed

Chronic toxicity

- Target Organ Effects
  - None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

- The environmental impact of this product has not been fully investigated.
13. DISPOSAL CONSIDERATIONS

Waste disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT
- Proper shipping name ALKALOIDS, SOLID, N.O.S. (Harringtonine).
- UN/ID No 1544
- Packing group II

IATA
- UN/ID No 1544
- Proper shipping name ALKALOIDS, SOLID, N.O.S. (Harringtonine).
- Hazard class 6.1
- Packing group II

ADR
- Proper shipping name ALKALOIDS, SOLID, N.O.S. (Harringtonine).
- Hazard class 6.1
- UN/ID No 1544
- Packing group II

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard  no
Chronic Health Hazard  no
Fire Hazard  no
Sudden Release of Pressure Hazard  no
Reactive Hazard  no

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H300 - Fatal if swallowed H310 - Fatal in contact with skin H330 - Fatal if inhaled

Hazard statements
H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H330 - Fatal if inhaled

Revision Date 13-Jul-2015
Revision Note No information available.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS