1. PRODUCT AND COMPANY IDENTIFICATION

Product name            A-1331852
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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Warning

Hazard statements
H302 - Harmful if swallowed
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements - EU (§28, 1272/2008)
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P501 - Dispose of contents/container to an approved waste disposal plant
P273 - Avoid release to the environment
P391 - Collect spillage

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

General advice
If symptoms persist, call a physician.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse thoroughly with plenty of water, also under the eyelids. Call a physician immediately.

Skin contact
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

Inhalation
If fumes from reactions are inhaled, move to fresh air immediately. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

Ingestion
Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined

Suitable extinguishing media
Use:. Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Explosion Data
Sensitivity to Mechanical Impact
none.

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 | Use personal protective equipment. Avoid breathing vapors or mists. Ensure adequate ventilation. Evacuate personnel to safe areas. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. 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. Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. |
| Other information | Refer to protective measures listed in sections 7 and 8. See Section 12 for additional information. |

7. HANDLING AND STORAGE

| Advice on safe handling | Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Use only in well-ventilated areas. Do not eat, drink or smoke when using this product. |

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 | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Personal protective equipment | Tightly fitting safety goggles. No special protective equipment required. 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 | When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. |
## 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
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<td>Odor Threshold</td>
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</tr>
<tr>
<td>pH</td>
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<tr>
<td>Flash point</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Melting point/range</td>
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<tr>
<td>Explosion limits</td>
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<tr>
<td>Specific Gravity</td>
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<tr>
<td>Evaporation rate</td>
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</tr>
<tr>
<td>VOC Content(%)</td>
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</tr>
<tr>
<td>Odor</td>
<td>Physical State @20°C</td>
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<tr>
<td>Odor State</td>
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<tr>
<td>Autoignition temperature</td>
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</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>Autoignition temperature</td>
<td>No information available</td>
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<tr>
<td>Boiling point/boiling range</td>
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</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in DMSO to 100 mM.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>no data available</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**

Hazardous decomposition products formed under fire conditions. May emit toxic fumes under fire conditions.

**Hazardous polymerization**

Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Product Information**

Harmful if swallowed See also section . 2

**Ingestion**

Harmful if swallowed See also section . 2

**Chronic toxicity**

**Target Organ Effects**

None known.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Toxic to aquatic organisms. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods**

Dispose of in accordance with local regulations.

**Contaminated packaging**

Do not re-use empty containers.

## 14. TRANSPORT INFORMATION
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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
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</tr>
<tr>
<td>Chronic Health Hazard</td>
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</tr>
<tr>
<td>Fire Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>no</td>
</tr>
</tbody>
</table>

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
H302 - Harmful if swallowed H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

Hazard statements
H302 - Harmful if swallowed
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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