## Kit Summary

**Product Code(s)**  
AB193662

**Product name**  
Human RTK Phosphorylation Antibody Array - Membrane (71 Targets)

### Phosphatase Inhibitor Cocktail Set II

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium tartrate</td>
<td>-</td>
<td>6106-24-7</td>
<td>60</td>
<td>Acute Tox. 4 (H302)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium orthovanadate</td>
<td>237-287-9</td>
<td>13721-39-6</td>
<td>13</td>
<td>Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)</td>
<td>-</td>
</tr>
<tr>
<td>Imidazole</td>
<td>206-019-2</td>
<td>288-32-4</td>
<td>10</td>
<td>Skin Corr. 1B (H314) Repr. 1B (H360D) Acute Tox. 4 (H302)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>231-667-8</td>
<td>7681-49-4</td>
<td>3</td>
<td>Acute Tox. 3 (H301) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) (EUH032)</td>
<td>-</td>
</tr>
</tbody>
</table>

### Protease Inhibitor Cocktail

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEBSF hydrochloride</td>
<td>-</td>
<td>30827-99-7</td>
<td>99</td>
<td>Skin Corr. 1B (H314)</td>
<td>-</td>
</tr>
<tr>
<td>Leupeptin</td>
<td>-</td>
<td>55123-66-5</td>
<td>0.4</td>
<td>Muta. 2 (H341) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)</td>
<td>-</td>
</tr>
<tr>
<td>E-64</td>
<td>-</td>
<td>66701-25-5</td>
<td>0.3</td>
<td>STOT SE 2 (H371)</td>
<td></td>
</tr>
<tr>
<td>EDTA</td>
<td>200-449-4</td>
<td>60-00-4</td>
<td>0.15</td>
<td>Eye Irrit. 2 (H319)</td>
<td>-</td>
</tr>
</tbody>
</table>

### 2X Cell Lysis Buffer

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium deoxycholate</td>
<td>206-132-7</td>
<td>302-95-4</td>
<td>5</td>
<td>Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)</td>
<td>-</td>
</tr>
<tr>
<td>Triton-X-100</td>
<td>-</td>
<td>9002-93-1</td>
<td>2</td>
<td>Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)</td>
<td>-</td>
</tr>
</tbody>
</table>

## GHS / CLP - GHS - Classification
Signal Word
Danger

Hazard statements
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H360D - May damage the unborn child
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P270 - Do not eat, drink or smoke when using this product
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/ eye protection/ face protection
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
P273 - Avoid release to the environment
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3 Other information
A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

TRANSPORT INFORMATION

DOT
Proper shipping name
Corrosive solid, n.o.s. (contains AEBSF and Imidazole)
Hazard class
8
UN/ID No
UN1759
Packing group
II

IATA
Proper shipping name
Corrosive solid, n.o.s. (contains AEBSF and Imidazole)
Hazard class
8
UN/ID No
UN1759

ADR
Proper shipping name
Corrosive solid, n.o.s. (contains AEBSF and Imidazole)
Hazard class
8
UN/ID No
UN1759
Packing group
II
## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Phosphatase Inhibitor Cocktail Set II</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN/ID No</td>
<td>UN3263</td>
</tr>
<tr>
<td>Recommended use</td>
<td>For research use only</td>
</tr>
</tbody>
</table>

**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**

+1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

**GHS - Classification**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 1B</td>
</tr>
</tbody>
</table>

**GHS Label elements, including precautionary statements**

- Exclamation mark
- Chemical symbol
- GHS symbols
Signal Word
Danger

Hazard statements
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H360D - May damage the unborn child

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P270 - Do not eat, drink or smoke when using this product
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/eye protection/face protection
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P405 - Store locked up
P501 - Dispose of contents/container to an approved waste disposal plant

Other information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium tartrate</td>
<td>6106-24-7</td>
<td>40-70</td>
<td>Acute Tox. 4 (H302)</td>
</tr>
<tr>
<td>Sodium orthovanadate</td>
<td>13721-39-6</td>
<td>10-&lt;20</td>
<td>Acute Tox. 4 (H302)</td>
</tr>
<tr>
<td>Imidazole</td>
<td>288-32-4</td>
<td>7-13</td>
<td>Skin Corr. 1B (H314) Repr. 1B (H360D) Acute Tox. 4 (H302)</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>7681-49-4</td>
<td>1-5</td>
<td>Acute Tox. 3 (H301) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) (EUH032)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16
## 4. FIRST AID MEASURES

<table>
<thead>
<tr>
<th>General advice</th>
<th>If symptoms persist, call a physician. Immediate medical attention is required.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Immediate medical attention is required.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Move to fresh air. If symptoms persist, call a physician. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Rinse mouth. If symptoms persist, call a physician. Do NOT induce vomiting. Immediate medical attention is required.</td>
</tr>
<tr>
<td><strong>Notes to physician</strong></td>
<td>Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.</td>
</tr>
<tr>
<td><strong>Protection of first-aiders</strong></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><strong>Flammable properties</strong></th>
<th>Not flammable.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash point</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>Suitable extinguishing media</strong></td>
<td>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</td>
</tr>
<tr>
<td><strong>Explosion Data</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sensitivity to Mechanical Impact</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>Sensitivity to Static Discharge</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>Specific hazards arising from the chemical</strong></td>
<td>The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes</td>
</tr>
<tr>
<td><strong>Protective equipment and precautions for firefighters</strong></td>
<td>As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.</td>
</tr>
</tbody>
</table>
### 6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>Personal precautions</th>
<th>Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental precautions</td>
<td>Try to prevent the material from entering drains or water courses.</td>
</tr>
<tr>
<td>Methods for containment</td>
<td>Prevent further leakage or spillage if safe to do so.</td>
</tr>
<tr>
<td>Methods for cleaning up</td>
<td>Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid dust formation. Dam up. After cleaning, flush away traces with water.</td>
</tr>
<tr>
<td>Other information</td>
<td>Refer to protective measures listed in sections 7 and 8.</td>
</tr>
</tbody>
</table>

### 7. HANDLING AND STORAGE

<table>
<thead>
<tr>
<th>Advice on safe handling</th>
<th>Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical measures/Storage conditions</td>
<td>Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.</td>
</tr>
</tbody>
</table>
8. EXPOSURE CONTROLS/PERSO ENAL PROTECTION

Exposure Guidelines

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium orthovanadate</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>Ceiling: 0.05 mg/m³ V dust and</td>
</tr>
<tr>
<td>13721-39-6</td>
<td></td>
<td></td>
<td>fume 15 min</td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>IDLH: 250 mg/m³ F</td>
</tr>
<tr>
<td>7681-49-4</td>
<td></td>
<td></td>
<td>TWA: 2.5 mg/m³ F</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures

Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Face-shield.

Skin and body protection
Long sleeved clothing. Protective gloves.

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

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available.</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>Vapor density</td>
<td>No data available</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>solubility</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Incompatible products
Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Conditions to avoid
Exposure to air or moisture over prolonged periods.

Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information
Harmful if swallowed Corrosive to skin, eyes and/or respiratory tract.

Eye contact
Avoid contact with eyes Causes burns Corrosive to eyes

Skin contact
Harmful in contact with skin Corrosive Causes burns

Ingestion
Harmful if swallowed

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (Rat)</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium orthovanadate</td>
<td>330 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imidazole</td>
<td>220 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium fluoride</td>
<td>52 mg/kg (Rat)</td>
<td>175 mg/kg (Rat)</td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen Avoid repeated exposure Possible risks of irreversible effects

Reproductive toxicity
Product is or contains a chemical which is a known or suspected reproductive hazard

Developmental Toxicity
Contains ingredients that have suspected developmental hazards Possible risk of harm to the unborn child May cause birth defects

Target Organ Effects
None known.
12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium fluoride</td>
<td>272: 96 h Pseudokirchneriella subcapitata mg/L EC50 850: 72 h Desmodesmus subspicatus mg/L EC50 static</td>
<td>530: 96 h Lepomis macrochirus mg/L LC50 830: 96 h Lepomis macrochirus mg/L LC50 semi-static 38-68: 96 h Oncorhynchus mykiss mg/L LC50 static 180: 96 h Pimephales promelas mg/L LC50 semi-static</td>
<td>338: 48 h Daphnia magna mg/L EC50 98: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
</tr>
<tr>
<td>Imidazole</td>
<td></td>
<td></td>
<td>-0.02</td>
<td></td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium fluoride</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Proper shipping name Excerpted Quantity
Hazard class 8
UN/ID No UN3263
Packing group II

IATA
Proper shipping name Excerpted Quantity
UN/ID No UN3263
Hazard class 8
Packing group II

ADR
Proper shipping name Excerpted Quantity
UN/ID No UN3263
Hazard class 8
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 contains a chemical or 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>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium orthovanadate</td>
<td>13721-39-6</td>
<td>13</td>
<td>1.0</td>
</tr>
</tbody>
</table>

#### 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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium fluoride</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

#### U.S. State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium fluoride</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

#### 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 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled H314 - Causes severe skin burns and eye damage
H360D - May damage the unborn child H301 - Toxic if swallowed H319 - Causes serious eye irritation H315 - Causes skin irritation

Hazard statements
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H360D - May damage the unborn child

Revision Date  14-May-2020
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
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Protease Inhibitor Cocktail

UN/ID No: UN3261

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: +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>1</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

![Signal Word]

Signal Word
Danger

Hazard statements
H314 - Causes severe skin burns and eye damage
Precautionary Statements - EU (§28, 1272/2008)
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/ eye protection/ face protection
P264 - Wash face, hands and any exposed skin thoroughly after handling
P363 - Wash contaminated clothing before reuse
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/ physician
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information
No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEBSF hydrochloride</td>
<td>30827-99-7</td>
<td>60-99</td>
<td>Skin Corr. 1B (H314)</td>
</tr>
<tr>
<td>Leupeptin</td>
<td>55123-66-5</td>
<td>0.1-1</td>
<td>Muta. 2 (H341)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (H302)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (H312)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (H332)</td>
</tr>
<tr>
<td>E-64</td>
<td>66701-25-5</td>
<td>0.1-1</td>
<td>STOT SE 2 (H371)</td>
</tr>
<tr>
<td>EDTA</td>
<td>60-00-4</td>
<td>0.1-1</td>
<td>Eye Irrit. 2 (H319)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16
4. FIRST AID MEASURES

General advice
Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Inhalation
Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.

Ingestion
Rinse mouth. Do NOT induce vomiting. Immediate medical attention is required.

Notes to physician
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

Protection of first-aiders
Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined

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

Explosion Data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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 to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

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
Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid dust formation. Dam up. After cleaning, flush away traces with water.

Other information
Refer to protective measures listed in sections 7 and 8.
7. HANDLING AND STORAGE

Advice on safe handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.

Technical measures/Storage conditions
Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a dry, cool and well-ventilated place. 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
Tightly fitting safety goggles. Face-shield.

Skin and body protection
Long sleeved clothing. Protective gloves.

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
When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available.</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available.</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>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor 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>Solubility</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td>No information available.</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Page 15 / 24
10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Hazardous decomposition products Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Corrosive to skin, eyes and/or respiratory tract.

Eye contact Causes burns Corrosive to eyes May cause irritation

Skin contact Corrosive Causes burns

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA</td>
<td>2000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA</td>
<td>1.01: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>34-62: 96 h Lepomis macrochirus mg/L LC50 static 44.2-76.5: 96 h Pimephales promelas mg/L LC50 static</td>
<td>113: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION
DOT
- Proper shipping name: Corrosive solid, acidic, organic, n.o.s.(AEBSF)
- Hazard class: 8
- UN/ID No: UN3261
- Packing group: II

IATA
- UN/ID No: UN3261
- Proper shipping name: Corrosive solid, acidic, organic, n.o.s.(AEBSF)
- Hazard class: 8
- 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: yes
- Chronic Health Hazard: yes
- 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).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA</td>
<td>5000 lb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
</table>
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 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled H341 - Suspected of causing genetic defects H314 - Causes severe skin burns and eye damage H319 - Causes serious eye irritation H371 - May cause damage to organs

Hazard statements
H314 - Causes severe skin burns and eye damage

Revision Date 14-May-2020
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
1. PRODUCT AND COMPANY IDENTIFICATION

Product name 2X Cell Lysis Buffer

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 +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word Warning

Hazard statements
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects
Precautionary Statements - EU (§28, 1272/2008)
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/ eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium deoxycholate</td>
<td>302-95-4</td>
<td>3-7</td>
<td>Acute Tox. 4 (H302)   Aquatic Chronic 3 (H412)</td>
</tr>
<tr>
<td>Triton-X-100</td>
<td>9002-93-1</td>
<td>1-5</td>
<td>Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)</td>
</tr>
</tbody>
</table>

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
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Inhalation
Move to fresh air. If symptoms persist, call a physician.

Ingestion
Rinse mouth. If symptoms persist, call a physician.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
6. ACCIDENTAL RELEASE MEASURES

**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 to prevent contact with skin and eyes.

**7. HANDLING AND STORAGE**

**Personal precautions**
Ensure adequate ventilation.

**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.

**8. EXPOSURE CONTROLS/PERSOAL 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**

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin and body protection</td>
<td>Long sleeved clothing. Protective gloves.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available</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>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>Physical State @20°C</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>Liquid</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>Hazardous polymerization</td>
<td>Hazardous polymerization does not occur</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Stability</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>Acute toxicity</td>
<td>Irritating to eyes</td>
</tr>
<tr>
<td>Product Information</td>
<td>Irritating to skin, eyes and/or respiratory tract.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Irritating to eyes</td>
</tr>
<tr>
<td></td>
<td>May cause irritation</td>
</tr>
<tr>
<td>LD50 Oral</td>
<td>1,370 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 Dermal</td>
<td></td>
</tr>
<tr>
<td>LC50 Inhalation</td>
<td></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: None known based on information supplied.
- Hazardous polymerization: Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

- Acute toxicity: Irritating to eyes. Irritating to skin, eyes and/or respiratory tract.
- Eye contact: Irritating to eyes. May cause irritation.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium deoxycholate</td>
<td>1,370 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triton-X-100</td>
<td>1,800 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity: None known.

12. ECOLOGICAL INFORMATION

- Ecotoxicity: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

- Waste disposal methods: Dispose of in accordance with federal, state, and local regulations.
- Contaminated packaging: Do not re-use empty containers.
14. TRANSPORT INFORMATION

DOT  Not dangerous goods
IATA  Not dangerous goods
ADR  Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 3T3 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>
<td>yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>no</td>
</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 H412 - Harmful to aquatic life with long lasting effects H315 - Causes skin irritation H318 - Causes serious eye damage H411 - Toxic to aquatic life with long lasting effects

Hazard statements
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Revision Date 14-May-2020
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