Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name PMSF, protease inhibitor
UN/ID No UN2928
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 Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Danger
Hazard statements
H301 - Toxic if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/ eye protection/ face protection
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
P310 - Immediately call a POISON CENTER or doctor/ physician
P331 - Do NOT induce vomiting
P234 - Keep only in original container
P406 - Store in corrosive resistant aluminum container with a resistant inliner

Other information
Reacts violently with water
Caution - substance not yet tested completely

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>PMSF</td>
<td>329-98-6</td>
<td>60-99</td>
<td>Skin Corr. 1B (H314) Acute Tox. 3 (H301)</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
When symptoms persist or in all cases of doubt seek medical 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. If symptoms persist, call a physician. Immediate medical attention is required.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician. 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 without medical advice. Consult a physician. Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person.

Notes to physician
Treat symptomatically. See MSDS (material safety data sheet) for additional information.

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. Use CO2, dry chemical, or foam. Alcohol-resistant foam.

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. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

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. Avoid contact with skin, eyes and clothing. This component should be handled in a chemical fume hood if removed from container. 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.

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

<table>
<thead>
<tr>
<th>Protection</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face protection</td>
<td>Tightly fitting safety goggles.</td>
</tr>
<tr>
<td></td>
<td>Face-shield.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Long sleeved clothing.</td>
</tr>
<tr>
<td></td>
<td>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
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>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 solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td>Chloroform.</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>No information 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>Physical State @20°C</td>
<td>Solid</td>
</tr>
<tr>
<td>Water Solubility VALUE</td>
<td>Reacts with water</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</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**: Incompatible with strong acids and bases. Incompatible with oxidizing agents.
- **Conditions to avoid**: Exposure to air or moisture over prolonged periods.
- **Hazardous decomposition products**: Hydrogen fluoride. Thermal decomposition can lead to release of irritating gases and vapors.
- **Hazardous reactions**: Reacts violently with water.
- **Hazardous polymerization**: Hazardous polymerization does not occur.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

- **Product Information**: Product is toxic by ingestion Corrosive to skin, eyes and/or respiratory tract.
- **Eye contact**: Causes burns Avoid contact with eyes Corrosive to eyes
- **Skin contact**: Causes burns Corrosive Avoid contact with skin and clothing Wash thoroughly after handling
- **Ingestion**: Toxic if swallowed Causes burns

#### Chronic toxicity

- **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.

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 Toxic solid, corrosive, organic, n.o.s. (PMSF)
Hazard class 6.1
Subsidiary Class 8
UN/ID No UN2928
Packing group II

IATA
UN/ID No UN2928
Proper shipping name Toxic solid, corrosive, organic, n.o.s. (PMSF)
Hazard class 6.1
Subsidiary hazard class 8
Packing group II

ADR
Proper shipping name Toxic solid, corrosive, organic, n.o.s. (PMSF)
Hazard class 6.1 (8)
UN/ID No UN2928
Packing group II

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>yes</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
H314 - Causes severe skin burns and eye damage
H301 - Toxic if swallowed

Hazard statements
H301 - Toxic if swallowed
H314 - Causes severe skin burns and eye damage

Revision Date 11-Aug-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