Material Safety Data Sheet
Protease Inhibitor Cocktail (EDTA-Free, 100X in DMSO)  
Catalog No. B14001, B14002, B14003, B14004

Identification of substance:

Manufacturer/Supplier: Biotool LTD. 9330 Kirby Drive, STE 200, Houston, TX 77054 USA  
Toll Free: (713) 732-2181  
Fax: 1-866-747-4781  
Product name: Protease Inhibitor Cocktail (EDTA-Free, 100X in DMSO)  
Revision Date: Dec 19, 2013

Composition/date on component:

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Chemical Name</th>
<th>Hazardous Ingredient</th>
<th>CAS Registry Number</th>
<th>Molecular Weight</th>
<th>Molecular Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEBSF</td>
<td>4-(2-Aminoethyl)benzenesulfonyl fluoride hydrochloride</td>
<td>AEBSF</td>
<td>30827-99-7</td>
<td>239.5</td>
<td>C8H10NO2F x HCl</td>
</tr>
<tr>
<td>Aprotinin</td>
<td>Aprotinin</td>
<td>Aprotinin</td>
<td>9087-70-1</td>
<td>6511.44</td>
<td>C284H432N84O79S7</td>
</tr>
<tr>
<td>Bestatin</td>
<td>(2S)-2-[[2S,3R]-3-Amino-2-hydroxy-4-phenylbutanoyl]aminol-4-methylpentanoic acid</td>
<td>Bestatin</td>
<td>58970-76-6</td>
<td>308.4</td>
<td>C16H26N2O4</td>
</tr>
<tr>
<td>E-64</td>
<td>trans-Epoxysuccinyl-L-leucylamido(4-guanidino) butane L-trans-3-Carboxyoxiran-2-carbonyl-L-leucylgamatine N-(trans-Epoxysuccinyl)-L-leucine 4-guanidinobutylamide</td>
<td>E-64</td>
<td>66701-25-5</td>
<td>357.4</td>
<td>C13H27N6O6</td>
</tr>
<tr>
<td>Leupeptin</td>
<td>Leupeptin hemisulfate</td>
<td>Leupeptin</td>
<td>55123-66-5</td>
<td>475.6</td>
<td>Ac-Leu-Leu-arginal x ½ H2SO4</td>
</tr>
<tr>
<td>Pepstatin A</td>
<td>Isovaleryl-Val-Val-Sta-Ala-Sta</td>
<td>Pepstatin A</td>
<td>26305-03-3</td>
<td>685.9</td>
<td>C34H33N6O9</td>
</tr>
</tbody>
</table>

Identified uses: Laboratory chemicals

Hazards identification:

Hazard Description:
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.  
This substance is not classified as dangerous according to Directive 67/548/EEC.  
Absorbed through skin rapidly

Dec 19, 2013
**First aid measures:**

*After inhalation:* If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.

*After skin contact:* flush with copious amounts of water; remove contaminated clothing and shoes; call a physician.

*After eye contact:* check for and remove contact lenses and flush with copious amounts of water; assure adequate flushing by separating the eyelids with fingers; call a physician.

*After swallowing:* if swallowed, wash out mouth with copious amounts of water; call a physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

**Fire fighting measures:**

*Suitable extinguishing agents:* water spray, carbon dioxide, dry chemical powder or foam.

*Protective equipment:* wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

*Unusual fire hazard:* emits toxic fumes such as carbon monoxide, Sulphur oxides etc.

**Accidental release measures:**

*Person-related safety precautions:* cordon off area of spill; Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations.

Vapors can accumulate in low areas.

*Measures for cleaning/collection:* absorb solutions with finely powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to section Disposal Consideration.

**Handling and storage:**

*Information for safe handling:* avoid inhalation and contact with skin, eyes and clothing; material may be an irritant.

Ensure adequate ventilation.

Remove all sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Beware of vapors accumulating to form explosive concentrations.

Vapors can accumulate in low areas.

*Storage:* store solutions at -20°C. Keep container tightly closed.

**Exposure controls and personal protection:**

*Personal protective equipment as follows:*
  
  **Breathing equipment:** NIOSH/MSHA-approved respirator
  
  **Protection of hands:** chemical-resistant rubber gloves
  
  **Eye protection:** chemical safety goggles conforming to EN166
Physical and chemical properties:
Solubility in / Miscibility with water: <1
Appearance Form: liquid
Solvent content: DMSO
Flash point: 87 °C - closed cup

Stability and reactivity:
Stability: stable if stored as directed; avoid strong oxidizing agents
Thermal decomposition / conditions to be avoided: Heat, flames and sparks. protect from light and heat. Exposure to moisture may affect product quality.
Dangerous products of decomposition: thermal decomposition may produce toxic gases such as carbon monoxide, carbon dioxide, and sulphur oxides.
Incompatible materials: Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

Toxicological information:
RTECS#:
Acute toxicity: none known
Primary irritant effect: not known
Ingestion: May be harmful if swallowed.
On the skin: May be harmful if absorbed through skin. Causes skin irritation.
On the eye: Causes serious eye irritation.
Aggravated Medical Condition: Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body.

Ecological information:
General notes: no data available

Disposal consideration:
Dispose of in accordance with prevailing country, federal, state and local regulations.
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging
Dispose of as unused product.
**Transport information:**

DOT:

- **Proper shipping name:** none
- **Non-Hazardous for transport:** this substance is considered to be non-hazardous for transport

IATA class:

- **Proper shipping name:** none
- **Non-Hazardous for transport:** this substance is considered to be non-hazardous for transport

**Regulations:**

**Code letter and hazard designation of product:** Hazard-determining components of labeling: EU Risk And Safety phrases:

- S24/25: Avoid contact with skin and eyes
- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S28: After contact with skin, wash immediately with plenty of water
- S36/37/39: Wear protective clothing, gloves and eye/face protection
- R28: Very toxic if swallowed
- R38: Irritating to skin
- R41: Risk of serious damages to eyes
- R48: Toxic; danger of serious damage to health by prolonged exposure
- R62: Possible risk of impaired fertility
- R63: Possible risk of harm to unborn child

**Other information:**

The above information is believed to be correct based on our present knowledge but does not purport to be complete. This product is for research use only by trained personnel. The burden of safe use of this material rests entirely with the user. BIOTOOL LTD. disclaims all liability for any damage resulting from use of this material.