SAFETY DATA SHEET
Protease Inhibitor Cocktail

1. IDENTIFICATION

Product Name	Protease Inhibitor Cocktail
Recommended use of the chemical and restrictions on use	
Identified uses	For research and development
Restrictions on use	For laboratory use
Product Numbers	190222
Company Identification	Covaris, Inc. 14 Gill Street, Unit H Woburn, MA 01801
Customer Information Number	(781) 932-3959
Emergency Telephone Number	
Chemtrec Number	(800) 424-9300
Issue Date	November 19, 2019
Supersedes Date	This is the first issue.

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Serious eye damage/eye irritation - Category 1
Skin corrosion/irritation - Category 1B

Label Elements
Hazard Symbols

Signal Word: Danger

Hazard Statements
Causes severe skin burns and eye damage.

Precautionary Statements
Prevention
Do not breathe dusts or mists.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash hands thoroughly after handling.
Response
Immediately call a poison center or doctor/physician.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before re-use.
Storage
Store locked up.
Disposal
Dispose of contents/container in accordance with local regulation.

2. HAZARD IDENTIFICATION

Other Hazards
This product contains an ingredient that can release hydrogen fluoride causing delayed burns and damage from absorption of fluoride ions which require immediate and specialized first aid and medical treatment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:2)	139-33-3	10 - 30%
4-(2-Aminoethyl)benzenesulfonyl Fluoride Hydrochloride	30827-99-7	5 - 10%
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-	25322-68-3	1 - 5%

*Exact concentration withheld as trade secret.

4. FIRST- AID MEASURES

Description of necessary first-aid measures
Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention immediately.
Skin
Wash affected area with plenty of water. Obtain medical attention immediately.
Ingestion
Do NOT induce vomiting. Rinse mouth with water. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.
Inhalation
Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
This product contains an ingredient that may release hydrogen fluoride. This can cause delayed burns and damage from absorption of fluoride ions. Treatment should follow guidelines for treating HF exposure.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media
Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers. Do not use high volume water jet.

Specific hazards arising from the chemical
This product may give rise to toxic gases in a fire.

5. FIRE - FIGHTING MEASURES

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing.

Environmental Precautions
Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation.

Methods and materials for containment and cleaning up
Transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective equipment when handling. Use in well ventilated area. Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

Conditions for safe storage
Store between 2° and 8°C to maintain product integrity. Storage area should be: cool - dry - well ventilated - out of direct sunlight - away from sources of ignition (heat, sparks, flames, pilot lights) - away from incompatible materials (see Section 10)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Glycine, N,N'-1,2-ethanediylbis[N- (carboxymethyl)-, sodium salt (1:2)
None established
4-(2-Aminoethyl)benzenesulfonyl Fluoride Hydrochloride
None established
Poly(oxy-1,2-ethanediyl), .alpha.-hydro- .omega.-hydroxy-
None established

Appropriate engineering controls
Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protection measures
Respiratory Protection
Wear respiratory protection if there is a risk of exposure to dust or aerosols formation. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.
Skin Protection
Chemical resistant gloves
Eye/Face Protection
Face shield and safety glasses

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Body Protection
If there is danger of splashing, wear overall or apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Solid (tablet)
Color	Clear
Odor	White
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	No data available
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Does not flash.
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	Soluble
Vapor Density (Air = 1)	No data available
VOC (g/l)	No data available
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not applicable
Lower explosive limit	Not applicable
Flammability (solid, gas)	Sustains combustion

10. STABILITY AND REACTIVITY

Reactivity
No known reactivity.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Exposure to moisture.

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Oxides of carbon oxides – nitrogen oxides (NOx) - sulphur oxides - hydrogen chloride gas - hydrogen fluoride

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Glycine, N,N'-1,2-ethanediylbis[N- (carboxymethyl)-, sodium salt (1:2)
Oral LD50 (rat) >2000 mg/kg
Inhalation acute toxicity estimate: 1.5 mg/l (dust/mist)
4-(2-Aminoethyl)benzenesulfonyl Fluoride Hydrochloride
Oral LD50 (rat) 2800 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-hydro- .omega.-hydroxy-
Oral LD50 (rat) 28,000 mg/kg
Dermal LD50 (rabbit) 20,000 mg/kg
Inhalation acute toxicity estimate: 5.1 mg/l (dust/mist)

Specific Target Organ Toxicity (STOT) – single exposure
Available data indicates this product is not expected to cause target organ effects after a single exposure.

Specific Target Organ Toxicity (STOT) – repeat exposure
Available data indicates this product is not expected to cause target organ effects after repeated exposure.

Serious Eye damage/Irritation
Causes serious eye damage.

Skin Corrosion/Irritation
Causes to severe burns to skin.

Respiratory or Skin Sensitization
Available data indicates this product is not expected to cause sensitization.

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity
Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard
Not an aspiration hazard.

Other Hazards
This product contains an ingredient that may release hydrogen fluoride. This can cause delayed burns and damage from absorption of fluoride ions.

12. ECOLOGICAL INFORMATION

Ecotoxicity
This product has no known acute or chronic aquatic toxicity.

Glycine, N,N'-1,2-ethanediylbis[N- (carboxymethyl)-, sodium salt (1:2)
LC50 (bluegill sunfish)>100 mg/l 96 hr
EC50 (daphnia magna) >100 mg/l 48 hr

12. ECOLOGICAL INFORMATION

Mobility in soil
Not expected to adsorb on soil.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product contains a component that is not listed or exempted from listing on the US EPA Toxic Substance Control Act Chemical Substance Inventory. Therefore, this product is restricted to research and development purposes only.

Canada DSL Inventory
This product contains components that are not listed on the Domestic Substance List (DSL) or the NDSL.

SARA Title III Sect. 311/312 Categorization
Skin corrosion – Serious eye damage

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
ECHA: European Chemicals Agency
IARC: International Agency for Research on Cancer
NA: Denotes no information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value

16. OTHER INFORMATION

Revision Date: November 19, 2019
Replaces: This is the first issue.
Changes made: Not applicable

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.
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