
1. IDENTIFICATION

Product Name	Halt Protease Inhibitor Cocktail
Recommended use of the chemical and restrictions on use	
Identified Uses	For Research and Development Use Only
Product Numbers	190222
Company Identification	Covaris, Inc. 14 Gill Street, Unit H Woburn, MA 01801
Customer Information Number	(781) 932-3959
Emergency Telephone Number	(800) 424-9300 (for emergencies only)
Chemtrec Number	(800) 424-9300
Issue Date	October 31, 2013
Supersedes Date	

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

2. HAZARD IDENTIFICATION

Hazard Classification

Serious eye damage/eye irritation - Category 2A
Skin corrosion/irritation - Category 2

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Causes serious eye irritation.
Causes skin irritation.

Precautionary Statements**Prevention**

Wear eye/face protection.
Wear protective gloves.
Wash hands thoroughly after handling.

Response

If skin irritation occurs, get medical advice/attention.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If on skin: wash with plenty of soap and water.

2. HAZARD IDENTIFICATION

Storage

None

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

None

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0 - 10%
Acute dermal toxicity	0 - 10%
Acute inhalation toxicity	90 - 100%
Acute aquatic toxicity	0 - 10%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Dimethyl sulfoxide	67-68-5	80 – 95%
Benzenesulfonyl fluoride, 4-(2-aminothethyl)-hydrochloride	30287-99-7	1 – 10%

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 if soreness or redness persists.

Skin

Wash affected area with plenty of water. Seek medical attention if symptoms persist.

Ingestion

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. 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.

4. FIRST- AID MEASURES

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media

Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers.

Specific hazards arising from the chemical

None known.

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

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective equipment when handling. Do not eat or drink while handling this material. Avoid contact with eyes, skin and clothing.

Conditions for safe storage

Store at 2 - 8°C (35.6 - 46.4°F). Keep container tightly closed when not in use. 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.

Benzenesulfonyl fluoride, 4-(2-aminoethyl)- hydrochloride

None established

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls

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

Individual protection measures**Respiratory Protection**

Respiratory protection not normally required.

Skin Protection

Chemical resistant gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Liquid
Color	Clear
Odor	Odorless
Odor Threshold	No data available
pH	No data available
Specific Gravity	No data available
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C)	>100°C
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	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

No known reactivity.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

10. STABILITY AND REACTIVITY

Conditions to Avoid

Heat - high temperatures

Incompatible Materials

Strong oxidizing agents - acids - bases

Hazardous Decomposition Products

Oxides of carbon - nitrogen oxides - sulfur oxides - hydrogen chloride gas - hydrogen fluoride - halogenated compounds

11. TOXICOLOGICAL INFORMATION

Acute ToxicityDimethyl Sulfoxide

Oral LD50 (rat) >5000 mg/kg

Dermal LD50 (rabbit) >5000 mg/kg

Benzenesulfonyl fluoride, 4-(2-aminoethyl)- hydrochloride

Oral LD50 (mouse) 2834 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure

Dimethyl sulfoxide: Available data indicates this component will not cause target organ effects after a single exposure.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to this component will cause target organ effects after single exposure.

Specific Target Organ Toxicity (STOT) – repeat exposure

Dimethyl sulfoxide: Available data indicates this component will not cause target organ effects after repeated exposure.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to indicate this component will cause target organ effects after repeated exposure.

Serious Eye damage/Irritation

Dimethyl sulfoxide: Slightly irritating in rabbit studies.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: Available data indicates that this component causes serious eye damage.

Skin Corrosion/Irritation

Dimethyl sulfoxide: Slightly irritating in rabbit studies.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: Available data indicates that this component causes severe skin burns.

Respiratory or Skin Sensitization

Dimethyl sulfoxide: Not sensitizing in guinea pig studies (skin).

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to indicate this component may cause skin or respiratory sensitization.

Carcinogenicity

Dimethyl sulfoxide: Not considered carcinogenic by IARC, NTP or OSHA.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to indicate product may present a carcinogenic hazard.

11. TOXICOLOGICAL INFORMATION

Germ Cell Mutagenicity

Dimethyl sulfoxide: Available data indicates this component is not mutagenic.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to indicate this component is mutagenic or genotoxic.

Reproductive Toxicity

Dimethyl sulfoxide: Available data indicates this component will not cause reproductive toxicity or birth defects.

Benzenesulfonyl fluoride, 4-(2-aminoethyl) - hydrochloride: No data available to indicate this component may cause reproductive toxicity or birth defects.

Aspiration Hazard

No data available to indicate product is an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Dimethyl sulfoxide

LC50 (fathead minnow) 34,000 mg/l 96 hr

EC50 (daphnia pulex) 27,500 mg/l 48 hr

Mobility in soil

No relevant studies identified.

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

Components of this product have not been verified for the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory

Components of this product have not been verified for inclusion on the Domestic Substance List (DSL).

15. REGULATORY INFORMATION

WHMIS Classification

D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

SARA Title III Sect. 311/312 Categorization

Immediate (Acute)

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 1

NFPA Code for Health - 2

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

HMIS Ratings

HMIS Code for Flammability - 1

HMIS Code for Health - 2

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service

ECHA: European Chemicals Agency

IARC: International Agency for Research on Cancer

N/A: Denotes no applicable 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

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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