1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier
Chemical Name: Decarboxylated S-Adenosylmethionine Sulfate Salt
Catalogue #: D222000

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
Product Uses: To be used only for scientific research and development. Not for use in humans or animals.

1.3 Details of the Supplier of the Safety Data Sheet
Company: Toronto Research Chemicals
2 Brisbane Road
Toronto, ON M3J 2J8
CANADA
Telephone: +14166659696
FAX: +14166654439
Email: orders@trc-canada.com

1.4 Emergency Telephone Number
Emergency#: +14166659696 between 0800-1700 (GMT-5)

2. HAZARDS IDENTIFICATION

WHMIS Classification (Canada) | WHMIS Symbols (Canada)
--- | ---
None | Not WHMIS controlled.

2.1/2.2 Classification of the Substance or Mixture and Label Elements
GHS Hazards Classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)
Not a hazardous substance by GHS.

EU Classification (According to EU Regulation 67/548/EEC)
Not a hazardous substance by this Classification.

EU Risk and Safety Statements (According to EU Regulation 67/548/EEC)
Hazard Statements | Hazard Codes
--- | ---
None | None

Risk Codes and Phrases
None | Not a hazardous substance by this Classification.

Safety Precaution Codes and Phrases

GHS Hazards Identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)
Signal Word: None

GHS Hazard Statements
None | Not a hazardous substance according to GHS.
GHS Precautionary Statements

2.3 Unclassified Hazards/Hazards Not Otherwise Classified

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Molecular Formula: $C_{14}H_{24}N_6O_7S_2\cdotH_2SO_4$  Molecular Weight: 452.51 +(98.08)
CAS Registry #: 67380-81-8  EC#: 
Synonyms
5’-[(3-aminopropyl)methylsulfonyl]-5’-deoxy-adenosine Sulfate Salt sulfate(salt) (1:1:1); (-)-S-Adenosyl-(5’)-3-methylthiopropylamine Sulfate Salt; Decarboxylated AdoMet Sulfate Salt; S-Adenosyl-3-methylthiopropylamine Sulfate Salt; S-Adenosyl-L-methionamine Sulfate Salt; S-Adenosylmethionamine Sulfate Salt; S-Methyl-S-adenosylhomocysteamine Sulfate Salt; S-Methyladenosylhomocysteamine Sulfate Salt; dAdoMet Sulfate Salt

3.2 Mixtures
Not a mixture.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures
General Advice
If medical attention is required, show this safety data sheet to the doctor.

If Inhaled
If inhaled, move person to fresh air. If not breathing, give artificial respiration and consult a physician.

In Case of Skin Contact
Wash affected area with soap and water. Consult a physician if any exposure symptoms are observed.

In Case of Eye Contact
Immediately rinse eyes with plenty of water for at least 15 minutes. Consult a physician.

If Swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. Seek medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or section 11.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed
No data available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture
Carbon oxides, Nitrogen oxides, Sulfur oxides

5.3 Advice for Firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information
No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Method and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

- Storage conditions: Hygroscopic, -20°C Freezer, Under inert atmosphere

#### 7.3 Specific End Uses
For scientific research and development only. Not for use in humans or animals.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control Parameters
Contains no components with established occupational exposure limits.

#### 8.2 Exposure Controls

**Appropriate Engineering Controls**
A laboratory fume hood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

**Personal Protective Equipment**
All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

**Eye/Face Protection**
Safety goggles or face shield. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

**Skin Protection**
Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Gloves used for incidental exposures (splash protection) should be designated as “chemical resistant” by EU standard EN 374 with the resistance codes corresponding to the anticipated use of the material. Unrated gloves are not recommended.

Suggested gloves: AnsellPro Sol-Vex nitrile gloves style 37-175, 15 mil thickness. Penetration time has not been determined.

Gloves used for prolonged direct exposure (immersion) should be designated “chemical resistant” as per EN 734 with the resistance codes corresponding to the anticipated use of the material.

Suggested gloves: AnsellPro Viton/Butyl gloves style 38-612, 4/8 mil thickness. Penetration time has not been determined.

These recommendations may not apply if the material is mixed with any other chemical, or dissolved into a solution. A risk assessment must be performed to ensure the gloves will still offer acceptable protection.

**Body Protection**
Fire resistant (Nomex) lab coat or coveralls.

**Respiratory Protection**
Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

A) Appearance
   White Solid

B) Odour
   No data available

C) Odour Threshold
   No data available

D) pH
   No data available

E) Melting Point/Freezing Point
   \( >128^\circ C \) (dec.)

F) Initial Boiling Point/Boiling Range
   No data available

G) Flash point
   No data available

H) Evaporation Rate
   No data available

I) Flammability (Solid/Gas)
   No data available

J) Upper/Lower Flammability/Explosive Limits
   No data available

K) Vapour Pressure
   No data available

L) Vapour Density
   No data available

M) Relative Density
   No data available

N) Solubility
   Water (slightly)

O) Partition Coefficient: n-octanol/water
   No data available

P) Auto-Ignition Temperature
   No data available

Q) Decomposition Temperature
   No data available

R) Viscosity
   No data available

S) Explosive Properties
   No data available

T) Oxidizing Properties
   No data available

9.2 Other Information
   no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
   No data available.

10.2 Chemical Stability
   Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions
   No data available.

10.4 Conditions to Avoid
   No data available.

10.5 Incompatible Materials
   No data available.

10.6 Hazardous Decomposition Products
   In the event of fire: See section 5. Other decomposition products: No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

A) Acute Toxicity
   Oral LD50: No data available.
   Inhalation LC50: No data available.
   Dermal LD50: No data available.

B) Skin Corrosion/Irritation
   No data available

C) Serious Eye Damage/Irritation
   No data available

D) Respiratory or Skin Sensitization
   No data available

E) Germ Cell Mutagenicity
   No data available
F) Carcinogenicity
   No data available
G) Reproductive Toxicity/Teratogenicity
   No data available
H) Single Target Organ Toxicity - Single Exposure
   No data available
I) Single Target Organ Toxicity - Repeated Exposure
   No data available
J) Aspiration Hazard
   No data available
K) Potential Health Effects and Routes of Exposure
   Inhalation
   May be harmful if inhaled. May cause respiratory tract irritation.
   Ingestion
   May be harmful if swallowed.
   Skin
   May be harmful if absorbed through skin. May cause skin irritation.
   Eyes
   May cause eye irritation.
L) Signs and Symptoms of Exposure
   The most important known symptoms and effects are described in the labeling (see section 2.2) and/or section 11.

To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated.

M) Additional Information
   RTECS: Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
   No data available.
12.2 Persistence and Degradability
   No data available.
12.3 Bioaccumulative Potential
   No data available.
12.4 Mobility in Soil
   No data available.
12.5 Results of PBT and vPvB Assessment
   No data available.
12.6 Other Adverse Effects
   No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods
   A) Product
   Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.
   B) Contaminated Packaging
   Dispose of as above.
   C) Other Considerations
   Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

14. TRANSPORT INFORMATION

14.1 UN Number
   DOT (US): N/A   IATA: N/A   IMDG: N/A   ADR/RID: N/A

14.2 UN Proper Shipping Name
   DOT (US)/IATA:
   Not dangerous goods
14.3 Transport Hazard Class(es)
DOT (US): N/A  IATA: N/A  IMDG: N/A  ADR/RID: N/A

14.4 Packing Group
DOT (US): N/A  IATA: N/A  IMDG: N/A  ADR/RID: N/A

14.5 Environmental Hazards
DOT (US): None  IATA: None  IMDG: None  ADR/RID: None

14.6 Special Precautions for User
None

15. REGULATORY INFORMATION
This safety data sheet complies with the requirements of WHMIS (Canada), OSHA 1910.1200 (US), and EU Regulation EC No. 1907/2006 (European Union).

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
A) Canada
   DSL/NDSL Status: This product is not listed on the Canadian DSL/NDSL.
B) United States
   TSCA Status: This product is not listed on the US EPA TSCA.
C) European Union
   ECHA Status: This product is not registered with the EU ECHA.

15.2 Chemical Safety Assessment
No data available

16. OTHER INFORMATION

16.1 Revision History
Original Publication Date: 10/24/2016

16.2 List of Abbreviations
LD50      Median lethal dose of a substance required to kill 50% of a test population.
LC50      Medial lethal concentration of a substance required to kill 50% of a test population.
LDLo     Lowest known lethal dose
TDLo     Lowest known toxic dose
IARC     International Agency for Research on Cancer
NTP      National Toxicology Program
RTECS    Registry of Toxic Effects of Chemical Substances

16.3 Further Information
Copyright 2015. Toronto Research Chemicals Inc. Copies may be made for internal use only. The above information is believed to be correct to the best of our knowledge, but is to be only used as a guide. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.