

MATERIAL SAFETY DATA SHEET

Cat# 2077-50, -100, -500, S-Adenosylmethionine disulfate tosylate

MSDS DATE: Jun 13, 2012

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: S-Adenosylmethionine disulfate tosylate
PRODUCT CODES: Cat# 2077-50, -100, -500
MANUFACTURER: BioVision, Inc.
ADDRESS: 155 S. Milpitas Boulevard, Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
CHEMTREC PHONE:
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Description | Volume | Safety Information |
|---|-------------|--|--------------------|
| S-Adenosylmethionine disulfate tosylate | Solid | 2077-50: 50 mg 2077-100: 100 mg 2077-500: 500 mg | See below |

SECTION 3: HAZARDS IDENTIFICATION

| Product Name/Chemical Name | CAS Number | EC-No. | MW | Chemical Formula |
|---|------------|--------|--------|--|
| S-Adenosylmethionine disulfate tosylate | 97540-22-2 | -- | 766.80 | $C_{15}H_{22}N_6O_5S \cdot C_7H_{12}O_{11}S_2$ |

S-Adenosylmethionine disulfate tosylate:

Emergency Overview

OSHA Hazards: Corrosive

GHS Classification: Skin corrosion (Category 1B)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger
Hazard statement(s): H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
Precautionary statement(s): P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

HMIS Classification

Health hazard: 3
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissues of the mucous membranes and upper respiratory tract.
Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns.
Ingestion: May be harmful if swallowed.

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

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In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5: FIRE-FIGHTING MEASURES

Condition of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous combustion products formed under fire conditions— no data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

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.

Recommended storage temperature: -20 °C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| Property | S-Adenosylmethionine disulfate tosylate |
|----------------------------|---|
| Appearance: | White to off-white solid |
| pH: | 1.3 |
| Water Solubility: | ~100 mg/ml |
| Other Solubility: | No data available |
| Specific Gravity (g/ml): | No data available |
| Boiling Point (°C): | No data available |
| Melting Point (°C): | No data available |
| Flash Point (°C): | No data available |
| Ignition Temperature (°C): | No data available |
| Density | No data available |

SECTION 10: STABILITY AND REACTIVITY

| Property | S-Adenosylmethionine disulfate tosylate |
|--------------------|---|
| Chemical stability | Stable under recommended storage conditions |

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| | |
|-----------------------------------|---|
| Conditions to avoid: | Avoid exposure to light and heat |
| Materials to avoid: | Strong oxidizing agents |
| Hazardous decomposition products: | Carbon oxides, nitrogen oxides, sulfur oxides |

SECTION 11: TOXICOLOGICAL INFORMATION

S-Adenosylmethionine disulfate tosylate:

Acute toxicity: LD50 Oral – rat – 3320 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

- IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissues of the mucous membranes and upper respiratory tract.

Skin: May be harmful if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional information: RTECS: AU7334500

SECTION 12: ECOLOGICAL INFORMATION

S-Adenosylmethionine disulfate tosylate:

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

S-Adenosylmethionine disulfate tosylate:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

S-Adenosylmethionine disulfate tosylate:

OSHA Hazards: Corrosive

SARA 302 Components: SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

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Pennsylvania Right To Know Components: S-Adenosylmethionine disulfate tosylate, CAS-No. 97540-22-2

New Jersey Right To Know Components: S-Adenosylmethionine disulfate tosylate, CAS-No. 97540-22-2

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

| Component | Risk Phrases | Safety Phrases |
|---|--------------|---------------------|
| S-Adenosylmethionine disulfate tosylate | R35, R41 | S22, S36/37/39, S45 |

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.