

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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1.1	Product identifiers Product Name:	S-(2-(N-((4-Amino-2-methylpyrimidin-5-yl)methyl)formamido)-5-(phosphonooxy)pent-2-		
	CAS Number:	en-3-yl) benzothioate(Benfotiamine) 22457-89-2		
	Catalog Numbers:	A390519		
1.2	Relevant identified uses of the substance or mixture and uses advised against			
	Identified uses:	For laboratory research purposes.Not for drug or household use.		
1.3	Details of the supplier of the safety data sheet Ambeed, Inc.			
	3205 N WILKE RD, Tel: 630-580-1088	STE 3205-125, Arlington Hts, IL 60004, USA E-mail: sales@ambeed.com		
1.4		ne number USA): 1-352-323-3500 Canada): 1-800-535-5053		
2.	HAZARDS IDENT	TIFICATION		
2.1	GHS Classification i Skin corrosion/irritat Serious eye damage	e/eye irritation(Category 2A) H319 n toxicity, single exposure;Respiratory H335		
2.2	GHS Label elements Pictogra	s, including precautionary statements		
	Signal word:	Warning		
	Hazard statement(s)	)		
	H315	Causes skin irritation		
	H319	Causes serious eye irritation		
	H335	May cause respiratory irritation		
Precautionary statement(s)		ment(s)		
	P233	Keep container tightly closed.		
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.		
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.		
	P264	Wash hands thoroughly after handling.		
	P271	Use only outdoors or in a well-ventilated area.		
	P280	Wear protective gloves/protective clothing/eye protection/face protection.		
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.		
	P304	IF INHALED:		

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P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove
	contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P340	Remove victim to fresh air and keep at rest in a position comfortable
	for breathing.
P362	Take off contaminated clothing and wash before reuse.
P403	Store in a well-ventilated place.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to in accordance with local regulation

#### 2.3 Other hazards

Additional precautionary phrases are located throughout the safety data sheet.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1	Molecular Formula:	C19H23N4O6PS
	Molecular Weight:	466.4479

Component		Concentration		
S-(2-(N-((4-Amino-2-methylpyrimidin-5-yl)methyl)formamido)-5-(phosphonooxy)pent-2-en-3-yl) benzothioate				
CAS Number	22457-89-2	-		

## 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

#### General advice

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

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#### 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. Take victim immediately to hospital. Consult a physician.

#### 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.

#### 4.2 Most important symptoms and effects, both acute and delayed

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The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

#### 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media: alcohol-resistant foam, dry chemical or carbon dioxide Unsuitable extinguishing media: no data

5.2 Special hazards arising from the substance or mixture In combustion toxic fumes may form.

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

#### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas.Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.Do not attempt to take action without suitable protective clothing.For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains or river. Alert the neighbourhood to the presence of fumes or gas.

#### 6.3 Methods and materials for containment and cleaning up

Mix with sand or vermiculite. Sweep up and shovel. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

#### 6.4 Reference to other sections

For disposal see section 13.

#### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Wash hands thoroughly after handling. Ensure there is sufficient ventilation of the area.

Normal measures for preventive fire protection. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated area. Containers which are opened must be carefully resealed and kept upright to prevent leakage.Keep in dark place,Inert atmosphere,2-8°C

#### 7.3 Specific end use(s)

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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Page 3 of 7





#### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin 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.

#### **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.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

#### Control of environmental exposure

Do not let product enter drains.

#### PHYSICAL AND CHEMICAL PROPERTIES 9.

Appearance	Form: Crystal - Powder / Colour: White - Almost white
Boiling Point	No data available
Melting Point	No data available
Odour	No data available
Odour Threshold	No data available
рН	No data available
Flash point	No data available
Evapouration rate	No data available
Vapour pressure	No data available
Vapor Density	No data available
Relative density	No data available
Solubility in water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity No Data	No data available

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Explosive properties Oxidizing properties

No data available 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 Not data available

#### 10.5 Incompatible materials Oxidizing agents

#### 10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxides, oxides of phosphor, oxides of sulfur

#### TOXICOLOGICAL INFORMATION 11.

#### 11.1 Information on toxicological effects

- Acute Toxicity Skin corrosion/irritation Serious eye Damage/irritation Respiratory or skin sensitisation Germ Cell mutagenicity Carcinogenicity Reproductive toxicity STOT-single exposure STOT-repeated exposure Aspiration hazard
- No data available No data available

#### 11.2 Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH AmBee

#### ECOLOGICAL INFORMATION 12.

#### 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

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No data available

12.5 Results of PBT and vPvB assessment No data available

#### 12.6 Other adverse effects

No data available

#### **DISPOSAL CONSIDERATIONS** 13.

#### 13.1 Waste treatment methods

#### **Disposal Operations**

Consult state, local or national regulations for proper disposal. Hand over to authorised disposal company as hazardous waste.

#### **Disposal of Packaging**

Disposal must be made according to official regulations.

#### AmBeed 14. TRANSPORT INFORMATION 14.1 UN number IMDG: -ADR/RID: -IATA: -14.2 UN proper shipping name PLAMBer ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods 14.3 Transport hazard class(es) IMDG: -ADR/RID: -IATA: -14.4 Packaging group ADR/RID: -IMDG: -IATA: -14.5 Environmental hazards ADR/RID: -IMDG: -IATA: -14.6 Special precautions for user No special precautions required AmBeed 14.7 Further information No data available 15. REGULATORY INFORMATION Safety, health and environmental and national regulations: Product is not subject to any additional regulations or provisions California Proposition 65

Not listed on California's listing of known or potential carcinogens.

#### **U.S. Federal Regulations**

SARA 313: Not applicable SARA 302: Not applicable SARA 311/312 Hazard Categories: See section 2 for more information

#### Safety Assessment

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No Chemical Safety Assessment

#### 16. OTHER INFORMATION

The reference company name of written contents

Company: Ambeed, Inc.

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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority, products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

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