



SAFETY DATA SHEET

Issue Date 09-May-2014

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Version 1

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

Product identifier

Product Name ADVAPAK™ S-1100 LUBRICATING STABILIZER

Other means of identification

SDS Code S-1100
Document S-1100
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lubricant. Stabilizer.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address	Manufacturer Address
PMC Biogenix, Inc. 1231 Pope Street Memphis, TN 38108 USA	PMC Biogenix, Inc. 1231 Pope Street Memphis, TN 38108 USA

Emergency telephone number

Company Phone Number PMC Biogenix Customer Service: 1-800-641-2152
24 Hour Emergency Phone Number CHEMTREC: 1-800-424-9300
Emergency Telephone Biogenix Environmental Health and Safety Department +1-901-320-5820

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Warning

Hazard statements

Harmful in contact with skin
Suspected of damaging fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure

**Appearance** solid (waxy), pellets**Physical state** Solid**Odor** Sulphurous**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: 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.
 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Drink 1 or 2 glasses of water. Get medical advice/attention if you feel unwell.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

May be harmful if swallowed. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.
 Unknown Acute Toxicity 2% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Mixed alkylmetallic mercaptoester sulfides	Proprietary	50-60	*
Paraffin wax	Proprietary	20-30	*
Metallic soap	Proprietary	10-20	*
Synthetic wax	Proprietary	1-5	*
Inorganic Salt	Proprietary	1-5	*

* The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures**General advice**

If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician. Rinse mouth.
Self-protection of the first aider	Use personal protective equipment as required.
<u>Most important symptoms and effects, both acute and delayed</u>	
Symptoms	No information available.
<u>Indication of any immediate medical attention and special treatment needed</u>	
Note to physicians	May cause sensitization of susceptible persons. For inhalation exposure consider treatment for hydrogen sulfide (H ₂ S) exposure.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon dioxide (CO₂). Carbon monoxide. Hazardous metal fumes and oxides. Hydrocarbons. Oxides of sulfur.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Avoid creating dust. Ensure adequate ventilation, especially in confined areas. Dust can form an explosive mixture with air.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information. The product is insoluble and floats on water. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for cleaning up Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Hydrogen sulfide (H₂S), a decomposition by-product of this material, may be present in the headspace of the container. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place.

Incompatible materials Incompatible with oxidizing agents, Acids, Contact with acids may release hydrogen sulfide, a toxic and flammable gas that may form explosive mixtures in air.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Exposure limits are listed below, if they exist.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	PMC OEL
Mixed alkylmetallic mercaptoester sulfides	STEL: 0.2 mg/m ³ Sn TWA: 0.1 mg/m ³ Sn S*	TWA: 0.1 mg/m ³ Sn (vacated) TWA: 0.1 mg/m ³ Sn (vacated) S*	-	TWA: 0.07 mg/m ³ Sn (12 hour)
Metallic soap	TWA: 10 mg/m ³ except stearates of toxic metals	-	-	-
Inorganic Salt	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust	TWA: 1 mg/m ³ STEL: 3 mg/m ³
Aliphatic hydroxyl	-	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-	-

NIOSH IDLH

Immediately Dangerous to Life or Health

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations, Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Sulphurous
Appearance	solid (waxy), pellets	Odor threshold	No information available
Color	beige		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	Not Applicable
Melting point/freezing point	67 °C / 153 °F	(based on components)
Boiling point / boiling range	> 390 °C / 734 °F	Decomposes
Flash point	> 205 °C / > 401 °F	Setaflash
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	No information available	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	0.300000011920929
Density	1.05 g/cm ³ @ 25°C / 77 °F
Bulk density	No information available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.**Conditions to avoid**

Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible with oxidizing agents, Acids, Contact with acids may release hydrogen sulfide, a toxic and flammable gas that may form explosive mixtures in air.

Hazardous Decomposition ProductsCarbon dioxide (CO₂), Carbon monoxide, Hazardous metal fumes and oxides, Hydrocarbons, Oxides of sulfur.**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information** Reacts with gastric acid to form organotin chlorides The product has not been tested**Inhalation** Inhalation of dust in high concentration may cause irritation of respiratory system.**Eye contact** Dust contact with the eyes can lead to mechanical irritation.**Skin Contact** No data available.**Ingestion** No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Mixed alkylmetallic mercaptoester sulfides	= 300 - 2000 mg/kg bw (Rat)	>=1000 mg/kg bw	>200 mg/L
Paraffin wax	= 10000 mg/kg (Rat)	> 3600 mg/kg (Rabbit) = 5000 mg/kg (Rat)	
Metallic soap	5000 mg/kg (Rat)	5000 mg/kg (Rabbit)	
Synthetic wax	> 2000 mg/kg (Rat)		

Information on toxicological effects**Symptoms** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization** No information available.**Germ cell mutagenicity** No information available.**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.**Reproductive toxicity** No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Chronic toxicity** Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.**Target Organ Effects** Eyes, Respiratory system, Skin.**Aspiration hazard** No information available.**Numerical measures of toxicity - Product Information****Unknown Acute Toxicity** 2% of the mixture consists of ingredient(s) of unknown toxicity**The following values are calculated based on chapter 3.1 of the GHS document .****ATEmix (oral)** 4915 mg/kg**ATEmix (dermal)** 1641 mg/kg**ATEmix (inhalation-dust/mist)** 402 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

33.7% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Mixed alkylmetallic mercaptoester sulfides	= 0.64 mg/L 72 h EC50 = 0.28 mg/L NOEC Pseudokirchneriella subcapitata	> 4.4 mg/L 96 h LC50 Oncorhynchus mykiss		= 0.27 mg/L 48 h EC50 D. magna
Metallic soap		>100 mg/l		>100 mg/l (Daphnia magna)

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Mixed alkylmetallic mercaptoester sulfides	25.5

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

IATA Technical Name

Not a recommended mode of transport. 450 L Limit Per Package.

(mixed alkylmetallic mercaptoester sulfides)

UN/ID No.

3077

Proper shipping name

Environmentally hazardous substance, solid, n.o.s.

Hazard Class

9

Packing Group

III

Description

(mixed alkylmetallic mercaptoester sulfides)

IMDG

IMDG Technical Name

Regulated

UN/ID No.

3077

Proper shipping name

Environmentally hazardous substance, solid, n.o.s.

Hazard Class

9

Packing Group

III

Marine pollutant

This material meets the definition of a marine pollutant

Description (mixed alkylmetallic mercaptoester sulfides)

15. REGULATORY INFORMATION

All of the components in the product are on the following Inventory lists

The classification and labeling information in this Safety Data Sheet should be viewed as provisional.

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
AICS	Complies
DSL/NDSL	Complies
ENCS	Does not comply
KECL	Does not comply
PICCS	Does not comply
IECSC	Complies
NZIoC	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Any Substance regulated Title 40 of the Code of Federal Regulations, Part 372 is listed below, if it exists.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Any Substance regulated as a pollutant pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) is listed below, if it exists.

CERCLA

Any Substance regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) is listed below, if it exists.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Inorganic Salt	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2*	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

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Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet