

SAFETY DATA SHEET

Revision Date: 10/8/2019
Revision Number: 001.3



1. PRODUCT AND COMPANY INFORMATION			
Product Name:	Boeing Anti-Seize Compound LF-AS 328 Meets BMS3-28A	Item number(s):	11-01, 11-02, 11-03
Product Type:	Anti-Seize / Lubricant	NSN:	8030-01-568-4294
Restriction of Use:	None Identified	Region(s):	U.S.A
Company Address:	Armite Laboratories Inc. dba Armite Lubricants 1560 Superior Ave Ste. A-4 Costa Mesa, CA 92627	Telephone:	949 646-9035
		Product Emergency:	CHEM-TEL 800-225-3924

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Signal Word	Hazard Class	Hazard Category	Pictogram(s)
WARNING:	SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure)	2	
	SKIN IRRITANT	2	
	EYE IRRITANT	2B	

Hazard Statements

May cause damage to lungs through prolonged or repeated exposure if inhaled.
Causes skin & eye irritation.
Very toxic to aquatic life.

Precautionary Statements

Prevention: Do not breathe dust, fume or mist. Do not eat or smoke when using this product. Wash hands thoroughly after handling. Wear protective eyewear. Wear protective gloves.

Response: Get medical advice/attention if you feel unwell. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to remove, and continue to rinse. **IF ON SKIN:** Wash with plenty of soap & water. Seek medical attention if irritation persists.

Storage: Store in a cool well ventilated place.

Disposal: Follow Federal, State & Local rules & regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200 and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of chemicals (GHS).

3. COMPOSITION / INFORMATION ON INGREDIENTS		
Compound Component(s)	CAS Number	Percentage*
Zinc	7440-66-6	32-37
Zinc Oxide	1314-13-2	< 2
Petrolatum	8009-03-8	*
Molybdenum Disulfide	1317-33-5	*
Asphalt	8052-42-4	7-11
Petroleum Hydrocarbons (mixture)	64742-58-1 64742-01-4	*

SAFETY DATA SHEET

Revision Date: 10/8/2019

Revision Number: 001.3



*Exact percentage is a trade secret, concentration range is provided to assist user in providing appropriate protections.

4. FIRST AID MEASURES

- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
- Skin contact:** Wash with soap and water. If hot material contacts the skin, immediately cool before attempting removal. If symptoms develop and persist, seek medical attention.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.
- Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- Symptoms:** See section 11.

5. FIRE FIGHTING MEASURES

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with full face-piece operated in positive pressure mode.

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Water spray may be ineffective. Oil will float on water and can spread fire.

Unusual fire or explosion hazard: Closed container may explode when exposed to extreme heat.

Hazardous combustion products: Oxides of carbon. Acrid smoke and fumes.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not allow product to enter sewer or waterways.

Clean-up method: Contaminated surfaces will be extremely slippery. Scrape up as much material as possible. Clean residue with soap & water.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed.

Storage: Keep in a cool, well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	NIOSH REL
Petrolatum	5mg/m3 TWA Inhale fraction.	5-mg/m3 PEL Mist.	None established
Zinc (metallic)	10mg/m3 STEL 8 hrs. Inhalable; Particulates (insoluble) Not Otherwise Specified (PNOS) 3mg/m3 TWA 8 hr(s). Form: Respirable particulates (insoluble) Not Otherwise specified.	None established	None established

SAFETY DATA SHEET

Revision Date: 10/8/2019
Revision Number: 001.3



Zinc Oxide	2mg/m3 TWA (Respirable fraction) 10mg/m3 s5 min STEL (Respirable Frac)	15mg/m3 (Total Dust) TWA 8 hr 5mg/m3 (Respirable Dust) TWA 8 hr	REL 5mg/m ³ (dust & Fume) STEL 10mg/m ³ Fume 15mg/m ³ (ceiling) Dust
Petroleum Hydrocarbons	10mg/m3 STEL (TWA Dust)	5mg/m3 (oil Mist) 8 hr day	Not Known
Asphalt	5mg/m3 (Fume from heating)	Not Established	5mg/m3 (Fume from heating)
Molybdenum Disulfide* * (as Mo insoluble compounds)	10 mg/m3 TWA	15 mg/m3 TWA (total dust)	15 mg/m3 TWA* (total dust) *insoluble compounds as Mo

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste	Flash point:	Not Available
Color:	Dark Grey	VOC content:	Essentially 0
Odor:	Mild petroleum	Boiling point / range:	Not determined
Odor threshold:	Not available	Melting point /range:	Not determined
pH:	Not available	Evaporation rate:	Not available
Vapor Pressure:	Not available	Solubility in water:	Insoluble
Specific gravity:	Not available	Partition coefficient:	Not determined
Vapor density:	Not available	Flammable/Explosive limits	
Viscosity:	Not available	Lower limits:	Not available
Autoignition temp:	Not determined	Upper limits:	Not available

10. STABILITY AD REACTIVITY

Stability:	Stable at normal conditions.	Incompatible materials: Oxidizing agents. Strong organic & inorganic acids. Hazardous decomposition products: Burning generates smoke, leaving residue of soot & metal oxides.
Reactivity:	Not available.	
Hazardous reactions:	Will not occur.	
Conditions to avoid:	None known	

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Eyes, Inhalation, ingestion

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation. Inhalation of high levels of zinc compounds may cause tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat.

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do not induce vomiting. Aspiration Hazard.

Specific target organs (Repeated Exposure): Blood, Central nervous system. Eyes, Immune system, Irritant, Kidney, Metabolic, Pancreas, Respiratory.

SAFETY DATA SHEET

Revision Date: 10/8/2019
Revision Number: 001.3



Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Effects
Zinc	Oral LD (Rat= 630mg/kg	Blood, Central nervous system. Eyes, Immune system, Irritant, Kidney, Metabolic, Pancreas, Respiratory
Zinc Oxide	Oral LD (Rat) = >5g/kg	Blood, Gastrointestinal, Immune system, Irritant, kidney, Metabolic, Nervous system, pancreas, Respiratory, Skin

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Zinc	No	No	No
Zinc Oxide	No	No	No

12. ECOLOGICAL INFORMATION

Ecological Information: Zinc in the mineral dust form is insoluble but its processing or extended exposure in the aquatic or terrestrial environments may lead to the release of zinc in bio-available forms. Zinc is mobile and can be toxic in the aquatic environment with water hardness, pH and dissolved organic carbon content being regulating factors. It bio-accumulates in both plant & animal in terrestrial and aquatic systems. Zinc is moderately mobile in soils and is dependent on soil conditions, such as cation exchange capacity, pH, redox potential & chemical species present in the soil. Zinc also bio-accumulates in terrestrial plant, vertebrates and mammals with plant uptake dependent on soil composition.

Aquatic ecotoxicity

Ingredient / Test	Result	Species	Exposure
Zinc	-	Algae-Green Pseudokirchneriella Subcapitia-Exponential growth phase	72 hours
	Acute EC50 106 µg/l Fresh Water	Daphnia- Water Flea Daphnia magna	48 hrs
	Acute LC 50 238-269 µg/l Fresh Water	Fish- Flathead Minnow Pimehales promelas—newly or recently hatched	96 hrs
	Chronic NOEC 72.7µg/l Fresh Water	Daphnia- Water Flea - Daphnia magna	21 days
Zinc Oxide (growth rate)	Acute EC50.0 17mg/l	Algae –Salenastrum Capricornutum	72 hrs
- US EPA	Acute LC50 320ppm Fresh Water		

13. DISPOSAL CONSIDERATIONS

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

SAFETY DATA SHEET

Revision Date: 10/8/2019
Revision Number: 001.3



14. TRANSPORTATION INFORMATION

The classification of this product is due solely to the presence of one or more US Dot listed "Hazardous substances that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the reportable quantity are not regulated as hazardous materials

US Dept of Transportation (49 CFR) – Not Regulated

IATA- Not Regulated

IMDG- MARINE POLLUTANT

Proper shipping name: Environmentally hazardous substances, solid, n.o.s.

Hazard class or division: 9

Identification number: UN 3077

Packing group: III

Description: UN3077 Environmentally hazardous substance, solid, n.o.s. (Zinc Mixture) 9, III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA: All components are listed or are exempt from listing on the Toxic Substance Control Act Inventory.

CERCLA Reportable Qty: Zinc (CAS #7440-66-6) 1,000 lbs

SARA Section 302 EHS: Non above the reporting limits

SARA Section 311/312: Immediate Health, Delayed Health

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372). Zinc (CAS \$ 7440-66-6) Zinc oxide (CAS# 1314-13-2).

US State Right-To-Know Regulations: New Jersey, Massachusetts, Pennsylvania, Rhode Island

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information DSL/NDL : All components are listed on or are exempt from listing on the Canadian Domestic Substance List.

16. OTHER INFORMATION

Prepared by: Armite Laboratories Inc.

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