SAFETY DATA SHEET

Issue Date 31-Mar-2014 **Revision Date** 31-May-2016 **Version** 2

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

Product identifier

Product Name **ADVALUBE™ F-1020 SPECIALTY LUBRICANT**

Other means of identification

Biogenix Product Code F-1020
SDS Code F-1020
Document F-1020

Recommended use of the chemical and restrictions on use

Recommended Use Lubricant.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address
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 Chemtrec

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

Hazard statements
Handle in accordance with good industrial hygiene and safety practice

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance pellets **Physical state** Solid **Odor** Slight

Hazards not otherwise classified (HNOC)

Other Information

Causes mild skin irritation.
Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Fatty Acid Ester Lubricant	Proprietary	90-95	*
Fatty alcohols	Proprietary	1-6	*

*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

Eye contact Molten product can cause thermal burns. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. (Call a physician if irritation persists).

Skin Contact Molten product can cause thermal burns. In case of burns, immediately cool affected skin for as long as possible with cold water. Wash off immediately with plenty of water for at least 15 minutes. (Get medical attention immediately if symptoms occur).

Inhalation Remove to fresh air. (Get medical attention immediately if symptoms occur).

Ingestion Molten product can cause thermal burns. Clean mouth with water and drink afterwards plenty of water. (Get medical attention immediately if symptoms occur).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

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
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon oxides. Hydrocarbons.

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 creating dust. Ensure adequate ventilation, especially in confined areas. Dust can form an explosive mixture with air.

Environmental precautions

Environmental precautions 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 Where possible allow molten material to solidify naturally.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Acids, Strong oxidizing agents.

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
Dust DUST	TWA: 10 mg/m³ Inhl TWA: 3 mg/m³ Resp	TWA: 5 mg/m³ Resp TWA: 15 mg/m³ Total 29CFR1910.1000	-	-

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations, Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Heat resistant gloves are recommended when handling molten materials.

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 Avoid contact with skin, eyes or clothing. Avoid breathing (dust, vapor, mist, gas). Wash face, hands and any exposed skin thoroughly after handling. Use personal protective equipment as required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	pellets	**Odor**	Slight
Color	white	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	6.5	
Melting point / freezing point	42 - 47 °C / 107 - 116 °F	
Boiling point / boiling range		
Flash point	> 200 °C / > 392 °F	No information available
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
Density	0.54 g/cm3
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No known effects under normal use conditions.

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
Acids, Strong oxidizing agents.

Hazardous Decomposition Products
Carbon oxides, Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs. No known effect based on information supplied.
Eye contact	Dust contact with the eyes can lead to mechanical irritation. Molten product can cause thermal burns.
Skin Contact	Molten product can cause thermal burns.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Fatty Acid Ester Lubricant	2000 mg/kg (Rat)		
Fatty alcohols	> 10000 mg/kg (Rat)	> 8000 mg/kg (Rabbit)	

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.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 15269 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

94.0001 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Fatty alcohols	= 235 mg/l ErC50	> 1000 mg/l LC50		= 1666: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical Name	Partition coefficient
Fatty alcohols	6.65

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

TDG Not regulated

IATA Not regulated.
Proper shipping name Not regulated

IMDG Not regulated

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 or Exempt
TSCA	Complies
AICS	Complies
DSL/NDSL	Complies
ENCS	Does not comply
KECL	Complies
PICCS	Complies
IECSC	Complies
NZIoC	Complies
TCSI	Complies

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
TCSI - Taiwan Chemical Substance Inventory

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	No
Chronic Health Hazard	No
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.

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Fatty Acid Ester Lubricant		X		

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
Fatty Acid Ester Lubricant			X

U.S. EPA Label Information
EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	**Health hazards** 1	**Flammability** 1	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 1	**Flammability** 1	**Physical hazards** 0	**Personal protection** X

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This material safety data sheet complies with the requirements of 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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