

Manufactured for:
GROWMARK, Inc.
220 South Ave.
Council Bluffs, IA 51503
800-798-6457

Safety Data Sheet

FS Spectra Lube Gray #2 Grease

Revision date: 01-25-2017

Version 1

1. IDENTIFICATION

1.1. Product identifier

Product name FS Spectra Lube Gray #2
Synonyms Axellence 162 HQM3 (US)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Lubricating grease
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer AXEL Americas, LLC
1437 Gentry St.
North Kansas City, MO 64116
United States
(816) 471-4590

1.4. Emergency telephone number

ChemTel Emergency telephone 1-800-255-3924
International Emergency telephone +01-813-248-0585

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.2. Label elements

Signal word None

Symbols/Pictograms None

2.3. Hazards not otherwise classified (HNOC)

May be harmful in contact with skin. Causes mild skin irritation.

2.4. Other information

4.126% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical name	CAS No	weight-%
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1)	68649-42-3	<2.5
Antimony Dialkyldithiocarbamate	15890-25-2	0.1-1

The exact percentage (concentration) of composition has been withheld as a trade secret.

Ingredient comments This product is a lithium complex grease based on mineral oil with additives. The mineral oils in the product contain <3% DMSO-extract (IP 346).

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Skin contact Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids.

Ingestion Do not induce vomiting without medical advice. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

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

Symptoms None known.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Use CO2, dry chemical, or foam.

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

5.2. Special hazards arising from the substance or mixture

Not flammable. Fire may produce irritating and/or toxic gases.

Hazardous combustion products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Advice 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

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Extremely slippery when spilled. Avoid contact with eyes and skin. Avoid breathing vapors or mists. Use personal protection recommended in Section 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Take up with sand or other non-combustible absorbent material and place into containers for later disposal.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Extremely slippery when spilled. Avoid prolonged or repeated contact with skin. Avoid breathing vapors or mists.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Keep at a temperature not exceeding 45°C.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Molybdenum disulfide	TWA: 10 mg/m ³ Mo inhalable fraction TWA: 3 mg/m ³ Mo respirable fraction	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Antimony Dialkyldithiocarbamate	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb
Limestone		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

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

8.2. Exposure controls

Engineering controls Eyewash stations
Ventilation systems

8.3. Individual protection measures, such as personal protective equipment



Hand protection	Wear protective nitrile rubber gloves. Thickness ≥ 0.38 mm - breakthrough time >480 minutes. Thickness 0.1 mm - splash protection.
Eye/face Protection	No special technical protective measures are necessary.
Skin and body protection	No special technical protective measures are necessary.
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	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Smooth
Physical state	Semi-solid
Color	grey
Odor	No information available
Odor threshold	No information available

Property	Values	Remarks • Method
pH		Not applicable
Melting point/freezing point		No information available
Boiling point/boiling range		Not applicable
Flash point	> 150 °C / > 302 °F	Based on base oils
Evaporation rate		Not applicable
Flammability (solid, gas)		No information available
Flammability limits in air		No information available
Upper flammability limit		
Lower flammability limit		
Vapor pressure		Not applicable
Vapor Density		Not applicable
Relative density		No information available
Water solubility		No information available
Solubility in other solvents		No information available
Partition coefficient (n-octanol/water)		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available

Other information

Density	< 1000 kg/m ³ @ 25 °C / 77 °F
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10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal processing.

11. TOXICOLOGICAL INFORMATION

11.1. Information on likely routes of exposure

Inhalation	Inhalation of oil mist may cause irritation, headaches, nausea and breathing difficulties.
Ingestion	Malaise (vague feeling of discomfort).
Skin contact	May be harmful in contact with skin.
Eye contact	May cause slight irritation.

11.2. Information on toxicological effects

Symptoms No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not hazardous based on component data.
Serious eye damage/eye irritation	Not hazardous based on component data.
Sensitization	Not hazardous based on component data.
Germ cell mutagenicity	Not hazardous based on component data.
Carcinogenicity	Not hazardous based on component data.
Reproductive toxicity	Not hazardous based on component data.
STOT-single exposure	Not hazardous based on component data.
STOT-repeated exposure	Not hazardous based on component data.
Aspiration hazard	Not hazardous based on component data.

11.4. Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	LC50 (lethal concentration)
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Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3	= 3600 mg/kg (Rat)	> 20 000 mg/kg (Rabbit)	-
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Acute toxicity 4.126% 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)	5489 mg/kg
ATEmix (dermal)	3758 mg/kg
ATEmix (inhalation-dust/mist)	150 mg/l
ATEmix (inhalation-vapor)	94000 mg/l

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Not regarded as dangerous for the environment. Occasional major emissions or frequently recurring minor emissions may have a harmful or disturbing effect.

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3	-	1.0 - 5.0: 96 h Pimephales promelas mg/L LC50 static 10.0 - 35.0: 96 h Pimephales promelas mg/L LC50 semi-static	-	1 - 1.5: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

Material does not bioaccumulate.

12.4. Mobility in soil

After release, adsorbs onto soil.

12.5. Results of PBT and vPvB assessment

No information available

12.6. Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations. Use personal protection recommended in Section 8.

Contaminated packaging Dispose of in accordance with federal, state and local regulations.

US EPA waste number No information available

Other information Waste codes should be assigned by the user based on the application for which the product was used

Chemical name	California hazardous waste status
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3	Toxic
Antimony Dialkyldithiocarbamate 15890-25-2	Toxic

14. TRANSPORT INFORMATION

14.1. UN number

Not regulated

14.2. UN proper shipping name

Not regulated

14.3. Transport hazard class(es)

Not regulated

14.4. Packing group

Not applicable

14.5. Environmental hazards

None

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

14.7. Special precautions for user

None

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

CWA (Clean Water Act) This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3		X		
Antimony Dialkyldithiocarbamate 15890-25-2		X		

International Inventories

TSCA Complies

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	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

US Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	CAS No	weight-%	SARA 313 - Threshold Values %
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3	68649-42-3	<2.5	1.0
Antimony Dialkylthiocarbamate 15890-25-2	15890-25-2	0.1-1	1.0

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

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

US State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (2:1) 68649-42-3	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

HMIS

Health hazards 1

Flammability 1

Physical hazards 0

Personal protection p

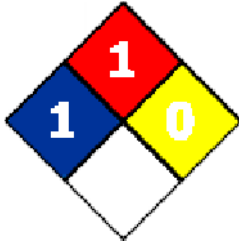
NFPA

Health hazards 1

Flammability 1

Instability 0

Special Hazard -



Revision date

01-25-2017

Revision note

No information available

Disclaimer

The information provided in this 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