



Material Safety Data Sheet

Prepared according to OSHA Hazard Communication Standard (29 CFR 1910.1200) and ANSI MSDS Standard (Z400.1). Complies with Canadian Workplace Hazardous Materials Information System (WHMIS) standards.

Revision Date 27-Jun-2014

Revision Number 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	SWEPCO 101 Moly Grease
Product Code	W20055
Chemical Family	Petroleum hydrocarbon
Recommended Use	Lubricant
Supplier Address	Southwestern Petroleum Corporation, 534 North Main St, Fort Worth, TX 76106 USA 1-800-877-9372 www.swepcousa.com
Emergency Telephone Number	Chemtrec 1-800-424-9300 in US; Canutec 1-613-996-6666 in Canada.
UN-No	None

2. HAZARDS IDENTIFICATION

Emergency Overview

Not expected to present a significant health hazard upon short term exposure. May cause skin irritation and/or dermatitis. May be harmful if swallowed. Product is combustible but will not readily ignite.



NFPA					
Health	1	Flammability	1	Instability	0
WHMIS	Not a WHMIS controlled product				
Appearance	Grey	Physical State	Grease	Odor	Petroleum distillates
Principle Routes of Exposure	Skin contact. Eye contact.				
Acute Health Effects					

Skin	Avoid prolonged and/or repeated contact with skin. Prolonged and/or repeated contact with this material may produce skin irritation or inflammation. Personnel with pre-existing skin disorders should avoid contact with this product.
Eyes	Contact with eyes may cause irritation.
Inhalation	None known.
Ingestion	Ingestion is not considered a likely route of exposure. Low order of acute oral toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury and possibly death.

Carcinogenic Effects Carcinogenic effect of the complete mixture has not been evaluated. Information on individual ingredients which may have carcinogenic effects, if any, will be found in Section 3 & 11.

Chronic Health Effects

Reports have associated repeated and prolonged occupational overexposure to petroleum based products with liver, kidney, brain and nervous system damage. There is, however, no reported human evidence that these effects occur when exposure is maintained below OSHA and ACGIH limits

Aggravated Medical Conditions No information available.

See Section 11 for additional toxicological information.

See Section 12 for ecological information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

If any of the components of this product are defined as hazardous by OSHA Hazard Communication Standard 1910.1200 and are present at 1% or more (0.1% or more for carcinogens) or are considered hazardous components according to Canadian WHMIS standards, they will be listed in this section. If no components appear in this section, no components of the product meet or exceed the reporting requirements.

Component	CAS-No	EINECS	Weight %	IARC	OSHA	NTP Carc	WHMIS
Molybdenum (IV) sulfide 1317-33-5 (1 - 9.99)	1317-33-5	215-263-9	1 - 9.99	-	-	-	Uncontrolled product according to WHMIS classification criteria
Carbonic acid, calcium salt (1:1) 471-34-1 (10 - 19.99)	471-34-1	207-439-9	10 - 19.99	-	-	-	Uncontrolled product according to WHMIS classification criteria
Graphite 7782-42-5 (1 - 9.99)	7782-42-5	231-955-3	1 - 9.99	-	-	-	D2A

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	First aid is not required.
Ingestion	Consult a physician or Poison Control Center immediately. Do not induce vomiting without medical advice.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Combustible material: may burn but does not ignite readily.
Suitable Extinguishing Media	Water spray or fog, dry chemical, carbon dioxide (CO2) or foam. Cool containers with flooding quantities of water until well after fire is out
Hazardous Combustion Products	No information available.
Specific Hazards Arising from the Chemical	Keep product and empty container away from heat and sources of ignition.
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	Avoid contact with skin, eyes and clothing.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-up	Take up mechanically and collect in suitable container for disposal.
Other Information	Report spills as required to the appropriate authorities.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice.
Storage	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

The table below lists known exposure levels for any components of this product which are considered hazardous. Keep in mind, however, that these exposure levels are for pure concentrations of these ingredients. If no table appears below, occupational exposure limits have not been established or are not known for any of the ingredients in this product:

Chemical Name	ACGIH TLV	OSHA PEL	Quebec OEL	Ontario TWAEV	EU OEL
Molybdenum (IV) sulfide	TWA: 0.5 mg/m ³ TWA: 10 mg/m ³ TWA: 3 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³	
Carbonic acid, calcium salt (1:1)	TWA: 10 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³	
Graphite	TWA: 2 mg/m ³	TWA: 2.5 mg/m ³	TWA: 10 mg/m ³ TWA: 2.5 mg/m ³	TWA: 2 mg/m ³	

Engineering Controls

Use in well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits (ACGIH TLV TWA: 5 mg/m³; ACGIH TLV STEL: 10 mg/m³; OSHA PEL TWA: 5 mg/m³).

Eye/face Protection

Safety glasses with side-shields.

Skin Protection

Use protective gloves and clothing if contact with product is likely.

Respiratory Protection

If personal exposure levels cannot be maintained below accepted exposure limits or if irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

General Hygiene Considerations

When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey	Odor	Petroleum distillates
Physical State	Grease	pH	No data available
Flash Point	179 °C	Autoignition Temperature	> 260 °C
Boiling Point/Range	Not applicable	Melting Point/Range	Not applicable
Flammability Limits in Air, %		Lower 0.9 Upper 7.0	
Specific Gravity (Water=1)	0.9	Solubility In Water	Insoluble
Vapor Density (Air=1)	>5	Volatiles, % Vol	1.8

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under recommended storage conditions.

Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Strong oxidizing agents.

Hazardous Decomposition Products Hydrocarbons. Carbon monoxide. Hydrogen sulfide (H₂S) may be produced above 250° F (121° C).

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity of this complete mixture has not been evaluated. If information is available on any of the individual components of the mixture, it is presented in this section. If no information appears in this section, there is no toxicological information available for any of the components of the mixture.

Acute Toxicity The table below indicates toxicological information for specific ingredients at concentrations indicated. If no table appears, no toxicological information was found.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Molybdenum (IV) sulfide			2820 mg/m ³ (Rat) 4 h
Carbonic acid, calcium salt (1:1)	6450 mg/kg (Rat)		

Chronic Toxicity Reports have associated repeated and prolonged occupational overexposure to petroleum based products with liver, kidney, brain and nervous system damage. There is, however, no reported human evidence that these effects occur when exposure is maintained below OSHA and ACGIH limits.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. If no table appears, no toxicological information was found.

Chemical Name	ACGIH	IARC	NTP Carc	OSHA
Molybdenum (IV) sulfide	A3			

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity and biodegradability of this complete mixture have not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water and should not be considered readily biodegradable. If information is available on any of the individual components of the mixture, it is presented in this section. If no information appears in this section, there is no ecotoxicity or biodegradability information available for any of the components of the mixture.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of contents/container in accordance with local regulation.

Chemical Name	California Hazardous Waste Status
Molybdenum (IV) sulfide	Ignitable (powder)

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

U.S. Regulations & Inventories The table below lists any regulatory or inventory listing information found for ingredients of this product which are considered hazardous. All other components are either listed on the inventories referenced or are exempt from listing. See Section 16 for explanation of column headings:

Chemical Name	CAS-No	TSCA	TSCA 12(b)	CERCLA/SARA 313 (de minimis concentration)	SARA Hazardous Substance Required Qty
Molybdenum (IV) sulfide	1317-33-5	Present	-	-	-
Carbonic acid, calcium salt (1:1)	471-34-1	Present	-	-	-
Graphite	7782-42-5	Present	-	-	-

U.S. State Right-to-Know Regulations The table below lists any regulatory or inventory listing information found for ingredients of this product which are considered hazardous. All other components are either listed on the inventories referenced or are exempt from listing. See Section 16 for explanation of column headings:

Chemical Name	Calif. Prop. 65	Massachusetts	New Jersey	Pennsylvania	Rhode Island
Molybdenum (IV) sulfide		X	X		
Carbonic acid, calcium salt (1:1)		X			
Graphite		X		X	X

Canada Regulations & Inventories The table below lists any regulatory or inventory listing information found for ingredients of this product which are considered hazardous. All other components are either listed on the inventories referenced or are exempt from listing. See Section 16 for explanation of column headings:

Chemical Name	CAS-No	DSL	NDSL	WHMIS
Molybdenum (IV) sulfide	1317-33-5	X	-	Uncontrolled product according to WHMIS classification criteria
Carbonic acid, calcium salt (1:1)	471-34-1	X	-	Uncontrolled product according to WHMIS classification criteria
Graphite	7782-42-5	X	-	D2A

This product has been classified in accordance with the hazard criteria of the Canadian CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR.

International Regulations & Inventories The table below lists any regulatory or inventory listing information found for ingredients of this product which are considered hazardous. All other components are either listed on the inventories referenced or are exempt from listing. See Section 16 for explanation of column headings:

Chemical Name	EINECS	AICS	CHINA	ENCS	PICCS
Molybdenum (IV) sulfide	215-263-9	X	X	X	X
Carbonic acid, calcium salt (1:1)	207-439-9	X	X	X	X
Graphite	231-955-3	X	X	-	X

16. OTHER INFORMATION**Regulatory Lists Searched & Other Sources of Information**

ACGIH - American Conference of Governmental Industrial Hygienists

ADN - European Agreement for International Carriage of Dangerous Goods by Inland Waterways

ADR - European Agreement for International Carriage of Dangerous Goods by Road

AICS - Australian Inventory of Chemical Substances
ANSI - American National Standards Institute
CAP65 - California Proposition 65 Hazard List
CAS - Chemical Abstract Services
CERCLA - Comprehensive Environmental Response, Compensation & Liability Act
CHINA - China Inventory
CPR - Canadian Controlled Products Regulations
DOT - United States Department of Transportation
DSL - Canada Domestic Substances List
EINECS - European Union (EU) European Inventory of Existing Commercial Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
ICAO - International Civil Aviation Organization
IMDG - International Maritime Dangerous Goods Code
MARTK - Massachusetts Right To Know List
NDSL - Canada Non-Domestic Substances List
NFPA - United States National Fire Protection Association
NIOSH - United States National Institute for Occupational Safety & Health
NJRTK - New Jersey Right To Know List
NTP - United States National Toxicology Program
OSHA - United States Occupational Safety & Health Administration
PARTK - Pennsylvania Right To Know List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
RCRA - United States Resources Conservation & Recovery Act
RID - European Agreement for International Carriage of Dangerous Goods by Rail
RIHSL - Rhode Island Hazardous Substance List
SARA - United States Superfund Amendments & Reauthorization Act
TDG - Canada Transportation of Dangerous Goods Act
TSCA - US Toxic Substances Control Act
WHMIS - Canada Workplace Hazardous Materials Information System

Definitions

EC50 - Effective Concentration (Concentration of a compound where 50% of the expected effect is observed.)
LC50 - Lethal Concentration (The concentration in water that will kill 50% of the test animals within a specific period of time, usually 96 hours.)
LD50 - Lethal Dose (The single dose that will kill 50% of the test animals by any route other than inhalation such as by ingestion or skin contact.)
OEL - Occupational Exposure Limit
PEL - Permissible Exposure Limits
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TWA - Time Weighted Average
TWAEV - Time Weighted Average Exposure Value

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End of MSDS