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 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	SWEPCO 812 Moly Dry Lube (Aerosol)
Product Code	W30910A
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

DANGER!

Emergency Overview Flammable aerosol. May be harmful if swallowed, inhaled, or absorbed through skin.

NFPA

Health	2	**Flammability**	4	**Instability**	0

WHMIS B5 - Flammable Aerosol, D1B - Immediate Toxic

Appearance	Dark grey	**Physical State**	Aerosol	**Odor**	Petroleum distillates

Principle Routes of Exposure Skin contact. Inhalation. 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 Avoid breathing of vapors or spray mist. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limits (ACGIH TLV TWA: 5 mg/m^3; ACGIH TLV STEL: 10 mg/m^3; OSHA PEL TWA: 5 mg/m^3).

Ingestion Ingestion is not considered a likely route of exposure. Harmful if swallowed.

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 WHIMIS 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
1,2-Butylene oxide 106-88-7 (< 1.0)	106-88-7	203-438-2	< 1.0	Group 2B	X	-	-
Butane 106-97-8 (10 - 19.99)	106-97-8	203-448-7	10 - 19.99	-	-	-	A, B1
Propane 74-98-6 (20 - 39.99)	74-98-6	200-827-9	20 - 39.99	-	-	-	A, B1
Trichloroethylene 79-01-6 (40 - 59.99)	79-01-6	201-167-4	40 - 59.99	Group 2A	X	Reasonably Anticipated	D1B, D2A

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, call a physician.
Ingestion	Do not induce vomiting without medical advice. Consult a physician. If vomiting occurs, keep head below hips to prevent aspiration.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Flammable aerosol. Containers may explode when heated.
Suitable Extinguishing Media	Water spray or fog, Dry chemical, Carbon dioxide (CO2), 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. Use inert absorbent materials to confine spills and absorb spill.
Methods for Clean-up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Other Information	Report spills as required to the appropriate authorities.

7. HANDLING AND STORAGE

Handling	Contents under pressure. Do not puncture, crush or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.
Storage	Store containers below 120° F (49° C). Keep out of the reach of children. Store in cool/well-ventilated place.

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
Butane	TWA: 1000 ppm	TWA: 1900 mg/m^3 TWA: 800 ppm	TWA: 1900 mg/m^3 TWA: 800 ppm	TWA: 1900 mg/m^3 TWA: 800 ppm	
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3	TWA: 1000 ppm TWA: 1800 mg/m^3	TWA: 1000 ppm	
Trichloroethylene	TWA: 50 ppm STEL: 100 ppm	TWA: 270 mg/m^3 TWA: 50 ppm STEL: 1080 mg/m^3 STEL: 200 ppm	STEL: 1070 mg/m^3 STEL: 200 ppm TWA: 269 mg/m^3 TWA: 50 ppm	STEL: 100 ppm TWA: 50 ppm	

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/m^3; ACGIH TLV STEL: 10 mg/m^3; OSHA PEL TWA: 5 mg/m^3).

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 Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Dark grey
Physical State Aerosol
Odor Petroleum distillates
pH No data available

Flash Point -60 ℃
Boiling Point/Range No data available
Flammability Limits in Air, %
Autoignition Temperature > 240 ℃
Melting Point/Range No data available
Lower 0.8 **Upper** 9.5

Specific Gravity (Water=1) No data available
Vapor Density (Air=1) > 1
Solubility In Water Insoluble
Volatiles, % Vol 95

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 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
1,2-Butylene oxide	500 mg/kg (Rat)	1757 mg/kg (Rabbit)	6.3 mg/L (Rat) 4 h
Butane			658 g/m^3 (Rat) 4 h
Propane		658 mg/kg (Rat)	
Trichloroethylene	4290 mg/kg (Rat)	20 g/kg (Rabbit)	26300 ppm (Rat) 1 h 8000 ppm (Rat) 4 h

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
1,2-Butylene oxide		Group 2B		X
Trichloroethylene		Group 2A	Reasonably Anticipated	X

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.

Chemical Name	Freshwater Algae	Microtox	Water Flea	DOT Marine Pollutant
1,2-Butylene oxide	EC50 > 500 mg/L 72 h	EC50 = 4840 mg/L 17 h	EC50 = 69.8 mg/L 48 h	
Trichloroethylene	EC50 = 450 mg/L 96 h	EC50 = 0.81 mg/L 24 h EC50 = 115 mg/L 10 min EC50 = 190 mg/L 15 min EC50 = 235 mg/L 24 h EC50 = 410 mg/L 24 h EC50 = 975 mg/L 5 min	EC50 = 2.2 mg/L 48 h	

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Do not puncture, crush or incinerate can. Do not cut on empty containers as they may contain vapors that are flammable. Dispose of in accordance with local regulations.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Trichloroethylene - 79-01-6	waste number U228	Included in waste streams: F001, F002, F024, F025, F039, K018, K019, K020	= 0.5 mg/L regulatory level	waste number U228

Component	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Trichloroethylene 79-01-6 (40 - 59.99)	Category I - Volatiles			

Chemical Name	California Hazardous Waste Status
Trichloroethylene	Toxic

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Consumer commodity
Hazard Class ORM-D
Description Consumer commodity ,ORM-D

TDG

Proper Shipping Name Aerosols
Hazard Class 2.1
UN-No UN1950

MEX

Hazard Class 2.2
UN-No UN1950
Description UN1950 Aerosols,2.2,

ICAO

UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Subsidiary Class 6.1
Description Aerosols,UN1950

IATA

UN-No UN1950
Proper Shipping Name Aerosols, flammable, toxic, containing substances in Division 6.1, Packing Group III
Hazard Class 2.1
Subsidiary Class 6.1
ERG Code 10P
Description UN1950,Aerosols, flammable, toxic, containing substances in Division 6.1, Packing Group III,2.1

IMDG/IMO

Hazard Class 2
UN-No UN1950

EmS No.	F-D, S-U
Description	UN1950, Aerosols,2

RID

Hazard Class	2
UN-No	UN1950
Classification Code	5A
Description	UN1950 Aerosols,2,,RID
ADR/RID-Labels	2

ADR

Proper Shipping Name	Aerosols
Hazard Class	2
UN-No	UN1950
Classification Code	5A
Description	UN1950 Aerosols,2,,ADR
ADR/RID-Labels	2

ADN

Proper Shipping Name	Aérosols
Hazard Class	2
UN-No	UN1950

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
1,2-Butylene oxide	106-88-7	Present	-	0.1 %	RQ= 100 lb final RQ RQ= 45.4 kg final RQ
Butane	106-97-8	Present	-	-	-
Propane	74-98-6	Present	-	-	-
Trichloroethylene	79-01-6	Present	-	0.1 %	RQ= 45.4 kg final RQ

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
1,2-Butylene oxide		X	X	X	X
Butane		X	X	X	X
Propane		X	X	X	X
Trichloroethylene	Carcinogen	X	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
1,2-Butylene oxide	106-88-7	X	-	
Butane	106-97-8	X	-	A, B1
Propane	74-98-6	X	-	A, B1
Trichloroethylene	79-01-6	X	-	D1B, D2A

This product has been classified in accordance with the hazard criteria of the Candian 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
1,2-Butylene oxide	203-438-2	X	X	X	X
Butane	203-448-7	X	X	X	X
Propane	200-827-9	X	X	X	X
Trichloroethylene	201-167-4	X	X	X	X

16. OTHER INFORMATION

Regulatory Lists Searched & Other Sources of Information

ACGIH - American Converence 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