



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 10/29/2012

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name SWEPCO 812 Moly Dry Lube (Bulk)
Product Code W30910B
Chemical Family Chemical Family
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 UN1710

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 2 **Flammability** 1 **Instability** 0
WHMIS D1B - Immediate Toxic
Appearance Light grey **Physical State** Liquid **Odor** Petroleum distillates
Principle Routes of Exposure Skin contact. Eye contact. Inhalation.
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. 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.

Hazardous Components

Chemical Name	CAS-No	EINECS	Weight %	IARC	OSHA	NTP Carc	WHMIS
1,2-Butylene oxide	106-88-7	203-438-2	< 1.0	Group 2B	X	-	-
Trichloroethylene	79-01-6	201-167-4	80 - 100	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. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, call a physician.
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 (CO ₂) 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. 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	Handle in accordance with good industrial hygiene and safety practice
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Chemical Name	ACGIH TLV	OSHA PEL	Quebec OEL	Ontario TWA EV	EU OEL
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	Light grey	Odor	Petroleum distillates
Physical State	Liquid	pH	No data available
Flash Point	No data available	Autoignition Temperature	>420°C
Boiling Point/Range	>87°C	Melting Point/Range	No data available
Flammability Limits in Air, %		Lower 0.9	Upper 7.0
Specific Gravity (Water=1)	0.9	Solubility In Water	Insoluble
Vapor Density (Air=1)	> 4.5	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 (H ₂ S) 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
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

This product contains no ingredients with a concentration of 0.1% or more which are known to be carcinogenic.

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

Dispose of contents/container in accordance with local regulation

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

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Trichloroethylene - 79-01-6	Category I - Volatiles			

Chemical Name	California Hazardous Waste Status
Trichloroethylene	Toxic

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III
Description Trichloroethylene Mixture ,6.1 UN1710,PG III

TDG

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III
Description TRICHLOROETHYLENE Mixture, 6.1,UN1710,PG III

MEX

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 8
UN-No UN1710
Packing Group III
Description UN1710 Trichloroethylene Mixture,8,III

ICAO

UN-No UN1710
Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
Packing Group III
Description Trichloroethylene Mixture,6.1,UN1710,PG III

IATA

UN-No UN1710
Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
Packing Group III
ERG Code 6A
Description UN1710,Trichloroethylene Mixture,6.1,PG III

IMDG/IMO

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III
EmS No. F-A, S-A
Description UN1710, Trichloroethylene Mixture,6.1,PG III

RID

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III

Classification Code T1
Description UN1710 Trichloroethylene Mixture,6.1,III,RID
ADR/RID-Labels 6.1

ADR

Proper Shipping Name Trichloroethylene Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III
Classification Code T1
Description UN1710 Trichloroethylene Mixture,6.1,III,ADR
ADR/RID-Labels 6.1

ADN

Proper Shipping Name Trichloréthylène Mixture
Hazard Class 6.1
UN-No UN1710
Packing Group III

15. REGULATORY INFORMATION

U.S. Regulations & Inventories No regulatory requirements found. All components of this product are either listed on applicable inventories or are exempt from listing requirements.

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
Trichloroethylene	79-01-6	Present	-	0.1 %	RQ= 45.4 kg final RQ

U.S. State Right-to-Know Regulations No regulatory requirements found. All components of this product are either listed on applicable inventories or are exempt from listing requirements.

Chemical Name	Calif. Prop. 65	Massachusetts	New Jersey	Pennsylvania	Rhode Island
1,2-Butylene oxide		X	X	X	X
Trichloroethylene	Carcinogen	X	X	X	X

Canada Regulations & Inventories No regulatory requirements found. All components of this product are either listed on applicable inventories or are exempt from listing requirements.

Chemical Name	CAS-No	DSL	NDSL	WHMIS
1,2-Butylene oxide	106-88-7	X	-	
Trichloroethylene	79-01-6	X	-	D1B, 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 No regulatory requirements found. All components of this product are either listed on applicable inventories or are exempt from listing requirements.

Chemical Name	EINECS	AICS	CHINA	ENCS	PICCS
1,2-Butylene oxide	203-438-2	X	X	X	X
Trichloroethylene	201-167-4	X	X	X	X

16. OTHER INFORMATION

Regulatory Lists Searched & Other Sources of Information

ACGIH - American Convergence 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

Revision Date 10/29/2012

End of MSDS