SAFETY DATA SHEET

1. Identification

Product identifier **Molylube Water Based Dry Film Lubricant**

Product Code 301085

Other means of identification

Synonyms Old Product Code 69000; For Package Codes 301085XXXXXX

Product Code 301085

Recommended use of the chemical and restrictions on use

Recommended use Dry Film Lubricant

Restrictions on use Not available.

Details of manufacturer or importer

Manufacturer

Calumet Branded Products, LLC
GPO Darling Park Towers 2 201 Sussex St. Sydney AU NSW 2000 Australia
2780 Waterfront Pkwy E. Dr., Suite 200 Indianapolis, IN 46214
1 317 328 5660
CHEMTREC: 1800 069 100 (AUS)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements, including precautionary statements

Hazard symbol(s)

Corrosion Exclamation mark Environment

Signal word Danger

Hazard statement(s) Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs (). May cause damage to organs () through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see on this label). Wash contaminated clothing before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container to .
Other hazards which do not result in classification	None known.
Supplemental information	30.97% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 30.97% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition / information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
Silicic Acid, Sodium Salt	1344-09-8	10 - < 20
Ammonium Hydroxyde	1336-21-6	< 0.3
Ammonia, Anhydrous	7664-41-7	< 0.2
Other components below reportable levels		80 - < 90

4. First-aid measures

Description of necessary first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
Symptoms caused by exposure	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Medical attention and special treatment	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Water fog. Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for fire fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Wear suitable protective equipment.
Hazchem code	None.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	24 mg/m3
		35 ppm
	TWA	17 mg/m3
		25 ppm

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	24 mg/m3
		35 ppm
	TWA	17 mg/m3
		25 ppm
Ammonium Hydroxyde (CAS 1336-21-6)	STEL	24 mg/m3
		35 ppm
	TWA	17 mg/m3
		25 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	35 ppm
	TWA	25 ppm
Ammonium Hydroxyde (CAS 1336-21-6)	STEL	35 ppm
	TWA	25 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	STEL	25 mg/m3
		35 ppm
	TWA	18 mg/m3
		25 ppm
Ammonium Hydroxyde (CAS 1336-21-6)	STEL	25 mg/m3
		35 ppm
	TWA	18 mg/m3
		25 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
Ammonia, Anhydrous (CAS 7664-41-7)	TWA	14 mg/m3
		20 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, for example personal protective equipment (PPE)

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

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Semi-Fluid.

Physical state Liquid.

Form Liquid.

Color Dark grey.

Odor Ammoniacal.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 4307 °F (2375 °C) estimated

Initial boiling point and boiling range Not available.

Flash point	> 392.0 °F (> 200.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Density	1250.00 kg/m³
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Partial
Solubility (other)	Not Soluble in Oil
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other physical and chemical parameters	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.25

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

11. Toxicological information

Information on possible routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to exposure	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Acute toxicity	Harmful if swallowed.

Product	Species	Test Results
Molylube Water Based Dry Film Lubricant		
Acute		
Inhalation		
LC50	Cat	688 mg/l, 1 Hours estimated
	Mouse	6554 mg/l, 10 Minutes estimated
		3100 mg/l, 1 Hours estimated
		3054 mg/l, 2 Hours estimated
	Rabbit	6504 mg/l, 1 Hours estimated
	Rat	7011 mg/l, 2 Hours estimated
		4705 mg/l, 1 Hours estimated
Oral		
LD50	Mouse	9368 mg/kg estimated
	Rat	9.4 g/kg estimated

Components	Species	Test Results
Ammonia, Anhydrous (CAS 7664-41-7)		
Acute		
Inhalation		
LC50	Cat	0.746 mg/l, 1 Hours
	Mouse	7.105 mg/l, 10 Minutes
		3.36 mg/l, 1 Hours
		3.31 mg/l, 2 Hours
	Rabbit	7.05 mg/l, 1 Hours
	Rat	4000 ppm, 1 Hours
		2000 ppm, 4 Hours
		7.6 mg/l, 2 Hours
		5.1 mg/l, 1 Hours
Oral		
LD50	Rat	350 mg/kg
Ammonium Hydroxyde (CAS 1336-21-6)		
Acute		
Oral		
LD50	Rat	350 mg/kg
Silicic Acid, Sodium Salt (CAS 1344-09-8)		
Acute		
Oral		
LD50	Mouse	1100 mg/kg
	Rat	1.1 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion / irritation Causes severe skin burns and eye damage.

Serious eye damage / irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Due to lack of data the classification is not possible.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Ammonia, Anhydrous (CAS 7664-41-7)			
Aquatic			
Fish	LC50	Chinook salmon (Oncorhynchus tshawytscha)	0.43 - 0.47 mg/l, 96 hours
Ammonium Hydroxyde (CAS 1336-21-6)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	15 mg/l, 96 hours
Silicic Acid, Sodium Salt (CAS 1344-09-8)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.28 - 0.57 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	1800 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	This product is miscible in water.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Silicic Acid, Sodium Salt)
Transport hazard class(es)	
Class	9
Subsidiary risk	-

Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silicic Acid, Sodium Salt)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

IATA; IMDG

Marine pollutant

15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

Australia Medicines & Poisons Appendix E

Ammonia, Anhydrous (CAS 7664-41-7)	For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once).

	For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once)., If swallowed, do NOT induce vomiting., If in eyes wash out immediately with water., If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water., If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Silicic Acid, Sodium Salt (CAS 1344-09-8)	For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once)., If swallowed, do NOT induce vomiting., If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes., If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Australia Medicines & Poisons Appendix F

Ammonia, Anhydrous (CAS 7664-41-7)	in concentrations Strongly alkaline. Avoid contact with eyes., Avoid contact with skin., Avoid breathing dust (or) vapour (or) spray mist.
Ammonium Hydroxyde (CAS 1336-21-6)	in concentrations Strongly alkaline. Avoid contact with eyes., Avoid contact with skin., Avoid breathing dust (or) vapour (or) spray mist.
Silicic Acid, Sodium Salt (CAS 1344-09-8)	applies to all preparations in any concentration Strongly alkaline. Avoid contact with eyes., Avoid contact with skin.

Australia Medicines & Poisons Schedule 5

Ammonia, Anhydrous (CAS 7664-41-7)	in preparations Exception was applied to data.
Silicic Acid, Sodium Salt (CAS 1344-09-8)	applies to all preparations in any concentration Exception may apply, see the regulation for relevance.

Australia Medicines & Poisons Schedule 6

Ammonia, Anhydrous (CAS 7664-41-7)	Exception may apply, see the regulation for relevance.
Silicic Acid, Sodium Salt (CAS 1344-09-8)	for non-domestic use. Exception may apply, see the regulation for relevance.

Australia National Pollutant Inventory (NPI): Threshold quantity

Ammonia, Anhydrous (CAS 7664-41-7)	10 TONNES/YR Threshold Category: 1
Ammonium Hydroxyde (CAS 1336-21-6)	10 TONNES/YR Threshold Category: 1

High Volume Industrial Chemicals (HVIC)

Ammonia, Anhydrous (CAS 7664-41-7)	100000 - 999999 TONNES See the regulation for additional information.
Silicic Acid, Sodium Salt (CAS 1344-09-8)	10000 - 99999 TONNES See the regulation for additional information.

International regulations

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-02-2017
Revision date	02-09-2018
Disclaimer	Calumet Branded Products, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	Transport Information: Material Transportation Information