

GLENDO LLC

SAFETY DATA SHEET

1. PRODUCT AND COMPANY INFORMATION

1.1 PRODUCT IDENTIFIER(S)

Product Name: Tube-O-Lube

Stock Number: 022-100, 004-760, 004-780, 004-781

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified use(s): Dry Lubricant

1.3 COMPANY INFORMATION

Distributor's Name: Glendo LLC

Address: 900 Overlander Road, Emporia, KS 66801

Phone: (620) 343-1084

2. HAZARDS IDENTIFICATION

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

CLP: Not classified

DSD/DPD: Not classified

2.2 LABEL ELEMENTS

CLP

Hazard statements: No label element(s) required

DSD/DPD

Risk phrases: No label element(s) required

2.3 HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

CLP: May form combustible dust concentrations in air. According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

DSD/DPD: May form combustible dust concentrations in air. According to European Directive 1999/45/EC this material is considered dangerous.

UNITED STATES (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

OSHA HCS 2012: Combustible Dust

2.2 LABEL ELEMENTS

OSHA HCS 2012

WARNING

Hazard statements: May form combustible dust concentrations in air.

2. HAZARDS IDENTIFICATION (continued)

2.3 OTHER HAZARDS

OSHA HCS 2012: Under United States Regulations (29CFR1910.1200 - Hazard Communication Standard), this product is considered hazardous.

CANADA

According to:WHMIS

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

WHMIS: Not classified

2.2 LABEL ELEMENTS

WHMIS: No label element(s) required.

2.3 OTHER HAZARDS

WHMIS: May form combustible dust concentrations in air. In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Material does not meet the criteria of a substance.

3.2 MIXTURES

COMPOSITION					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Graphite	CAS:7782-42-5 EC Number:231-955-3	99%	NDA	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Comb. Dust	NDA
Quartz	CAS:14808-60-7 EC Number:238-878-4	< 0.1%	NDA	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Inhalation: Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If breathing is difficult get medical attention.

Skin: IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention.

EYE: In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. Get medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Do not give anything by mouth to an unconscious person. Get medical attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to Section 11 - Toxicological Information.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

4.4 OTHER INFORMATION

Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media: LARGE FIRE: Water spray, fog or regular foam. SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards: Dust dispersed in air in sufficient concentrations and in the presence of an ignition source is an explosion hazard.

Hazardous Combustion Products: Graphite will burn, giving off carbon dioxide and potentially carbon monoxide.

5.3 Advice for firefighters

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. LARGE FIRES: Move containers from fire area if you can do it without risk. LARGE FIRES: Do not scatter spilled material with high pressure water streams. LARGE FIRES: Dike fire-control water for later disposal.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Personal Precautions: Avoid contact with material that generates respirable dust unless proper PPE is used. Do not walk through spilled material.

Emergency Procedures: Use normal clean up procedures. Ventilate closed spaces before entering.

6.2 Environmental precautions

Avoid run off to waterways and sewers.

6.3 Methods and materials for containment and cleaning up

Containment/Clean-up Measures: Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Use only with adequate ventilation. Use appropriate Personal Protective Equipment (PPE) Do not breathe dust. Avoid accumulation of dust. Good housekeeping practices should be in place to prevent accumulation of dusts on surfaces. If dusts are generated during processing eliminate ignition sources. Take precautionary measures against static charges. Graphite is conductive and can cause short circuits and other electrical malfunctions. Graphite causes slippery conditions. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Ventilate enclosed areas. Keep container closed.

7.3 SPECIFIC END USE(S)

Refer to Section 1.2-Relevant identified uses.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 PRECAUTIONS FOR SAFE HANDLING

EXPOSURE LIMITS/GUIDELINES				
	Result	ACGIH	NIOSH	OSHA
Quartz (14808-60-7)	TWAs	0.025 mg/m ³ TWA (respirable fraction)	0.05 mg/m ³ TWA (respirable dust)	Not established
Graphite (7782-42-5)	TWAs	2 mg/m ³ TWA (all forms except graphite fibers, respirable fraction)	2.5 mg/m ³ TWA (natural, respirable dust)	15 mg/m ³ TWA (synthetic, total dust); 5 mg/m ³ TWA (synthetic, respirable fraction)

Exposure Limits Supplemental

OSHA

- Graphite (7782-42-5): **Mineral Dusts:** (15 mppcf TWA (natural))
- Quartz (14808-60-7): **Mineral Dusts:** ((30)/(%SiO₂ + 2) mg/m³ TWA, total dust; (250)/(%SiO₂ + 5) mppcf TWA, respirable fraction; (10)/(%SiO₂ + 2) mg/m³ TWA, respirable fraction)

8.2 EXPOSURE CONTROLS

Engineering Measures/Controls: Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. All dust control equipment should contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Make sure that dust handling systems are designed to prevent escape of dust into the work area and that they do not leak.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29CFR1910.134 or European Standard EN149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face: Wear protective eye wear (goggles, face shield, or safety glasses). Eyewash station should be available.

Hands: Wear protective gloves.

Skin/Body: Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls: Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH= American Conference of Governmental Industrial Hygiene

NIOSH= National Institute of Occupational Safety and Health

OSHA =Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

MATERIAL DESCRIPTION

Physical Form: Solid

Appearance/Description: Gray solid with no odor.

Color: Gray

Odor: None

Odor Threshold: Data lacking

GENERAL PROPERTIES

Boiling Point: Data lacking

9. PHYSICAL AND CHEMICAL PROPERTIES (continued)

Melting Point: Data lacking

Decomposition Temperature: Data lacking

pH: Not relevant

Specific Gravity/Relative Density: = 2.25

Water Solubility: Insoluble

Viscosity: Data lacking

Explosive properties: Data lacking

Oxidizing properties: Data lacking

VOLATILITY

Vapor pressure: Data lacking

Vapor density: Data lacking

Evaporation rate: Data lacking

FLAMMABILITY

Flash point: Not relevant

UEL: Not relevant

LEL: Not relevant

Autoignition: Data lacking

Flammability (solid, gas): Data lacking

ENVIRONMENTAL

Octanol/Water Partition coefficient: Data lacking

9.2 OTHER SAFETY INFORMATION

No additional physical and chemical parameters noted.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Accumulation of dusts - mixtures of graphite dust and air are explosive when ignited.

10.5 Incompatible materials

Strong oxidizing agents, acids, and alkalis.

10.6 Hazardous decomposition products

On burning may release carbon dioxide and carbon monoxide.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Components		
Quartz (< 0.1%)	14808-60-7	Multi-dose Toxicity: Inhalation-Hamster TCLo • 3 mg/m ³ 6 Hour(s) 78 Week(s)-Intermittent; Lungs, Thorax, or Respiration: Fibrosis (interstitial) ; Lungs, Thorax, or Respiration: Changes in lung weight ; Inhalation-Rat TCLo • 80 mg/m ³ 26 Week(s)-Intermittent; Lungs, Thorax, or Respiration: Fibrosis, focal (pneumoconiosis); Blood: Changes in spleen ; Immunological Including Allergic: Decrease in cellular immune response ; Tumorigen / Carcinogen: Inhalation-Rat TCLo • 50 mg/m ³ 6 Hour(s) 71 Week(s)-Intermittent; Tumorigenic: Carcinogenic by RTECS criteria ; Liver: Tumors

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Route(s) of entry/exposure: Inhalation, Skin, Eye, Ingestion

Medical Conditions Aggravated by Exposure: Disorders of the lungs.

POTENTIAL HEALTH EFFECTS

INHALATION

Acute (Immediate): Exposure to dust may cause irritation.

Chronic (Delayed): No data available

SKIN

Acute (Immediate): Exposure to dust may cause mechanical irritation.

Chronic (Delayed): No data available.

EYE

Acute (Immediate): Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the work place may reduce visibility and may cause unpleasant deposits in eyes.

11. TOXICOLOGICAL INFORMATION (continued)

Chronic (Delayed): No data available.

INGESTION

Acute (Immediate): Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed): No data available.

Carcinogenic Effects: This material contains Quartz which is considered a carcinogen, however this material as a whole is not classified as a carcinogen.

Carcinogenic Effects			
	CAS	IARC	NTP
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen

Key to abbreviations

TC= Toxic Concentration

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Data lacking.

12.2 PERSISTENCE AND DEGRADABILITY

Data lacking.

12.3 BIOACCUMULATIVE POTENTIAL

Data lacking.

12.4 MOBILITY IN SOIL

Data lacking.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT

PBT and vPvB assessment has not been conducted for this material.

12.6 OTHER ADVERSE EFFECTS

No studies have been found.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

14. TRANSPORT INFORMATION

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA

14.6 Special precautions for user: None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Data lacking.

15. REGULATORY INFORMATION

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

D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)

SARA Hazard Classifications: Pressure (Sudden Release of)

INVENTORY					
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS
Graphite	7782-42-5	Yes	No	Yes	No
Quartz	14808-60-7	Yes	No	Yes	No

CANADA

LABOR

Canada - WHMIS - Classifications of Substances

Quartz 14808-60-7

Graphite 7782-42-5 D2A (natural); D2B (synthetic)

Canada - WHMIS - Ingredient Disclosure List

Quartz 14808-60-7 1 %

Graphite 7782-42-5 Not Listed

ENVIRONMENT

Canada - CEPA - Priority Substances List

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

EUROPE

OTHER

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011/65/EU) (RoHS)

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

JAPAN

ENVIRONMENT

Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

OTHER

Japan - Chemical Substance Control Law (CSCL) - Monitoring Chemical Substances

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

Japan - Poisonous and Deleterious Substances - Substances Not Considered Deleterious

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

Japan - Poisonous and Deleterious Substances - Substances Not Considered Poisonous

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

UNITED STATES

LABOR

15. REGULATORY INFORMATION (continued)**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

ENVIRONMENT**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

UNITED STATES - CALIFORNIA**ENVIRONMENT****U.S. - California - Proposition 65 - Carcinogens List**

Quartz 14808-60-7 carcinogen, initial date 10/1/88 (airborne particles of respirable size)

Graphite 7782-42-5 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

15. REGULATORY INFORMATION (continued)

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Quartz 14808-60-7 Not Listed

Graphite 7782-42-5 Not Listed

15.2 CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out.

15.3 OTHER INFORMATION

WARNING: This product contains a chemical known to the State of California to cause cancer.

16. OTHER INFORMATION

FURTHER INFORMATION

User is granted the ability to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. GLENDO, LLC. shall not be held liable for any damage resulting from handling or from contact with the above product.

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