



SAFETY DATA SHEET

DRY GRAPHITE LUBRICANT

Print Date: 23-Apr-2019

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Version 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Dry Graphite Lubricant

Other means of identification

Synonyms none

Recommended use of the chemical and restrictions on use

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

Zircon Industries Incorporated
4920 Commerce Parkway #9
Cleveland, OH 44128
216-595-0200

E-mail address

staff@liquidheat.com

Emergency telephone number

Emergency Telephone InfoTrac 1-800-535-5053

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin Corrosion / Irritation	Category 2
Serious Eye Irritation	Category 2A
STOT (Single exposure)	Category 3
STOT (Repeated exposure)	Category 2
Gasses under pressure	Category 1
Flammable Aerosol	Category 1
Flammable Liquid	Category 1

Label elements

Emergency Overview

DANGER



Hazard statements

- Causes Skin Irritation
- Extremely Flammable Aerosol
- May be fatal if swallowed
- Causes eye damage/ irritation
- Contains Gas Under Pressure; may explode if heated
- May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention

- Flammable liquid and vapor
- May be fatal if swallowed and enters airway.
- Causes skin irritation.
- Use personal protective equipment as required.
- Pressurized container. Do not pierce or burn, even after use
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves

Precautionary Statements - Response

- IF EXPOSED or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation or rash occurs: Get medical advice/attention
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth

Precautionary Statements - Storage

- Store in well-ventilated area
- Do not expose to temperatures above 50C / 122F

Precautionary Statements - Disposal

- Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not Applicable

Unknown Acute Toxicity 0% of the substance or mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical Name	CAS No.	Weight-%	Trade Secret
2-Propanol	67-63-0	40-60	*
n-Butyl Alcohol	71-36-3	0-2	*
1-Methoxy-2-Propanol	107-98-2	1-5	*
Propane	74-98-6	10-20	*
Butane	106-97-8	10-20	*
Heptane	142-82-5	5-15	*
Toluene	108-88-3	0.5-1.5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice

Immediate medical attention is required.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin Contact

Wash off immediately with soap and plenty of water.

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO2 or water spray.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

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, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Conditions for safe storage, including any incompatibilities	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.
Incompatible materials	None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
 NIOSH IDLH *Immediately Dangerous to Life or Health*

Appropriate engineering controls

Engineering Controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Safety Glasses with Side Shields.
Skin and body protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

Exposure Limits

2-Propanol
 200 ppm 492 mg/m3 TLV ACGIH
 400 ppm 984 mg/m3 STEL ACGIH
 400 ppm 980 mg/m3 PEL OSHA
 400 ppm 980 mg/m3 REL NIOSH
 500 ppm 1225 mg/m3 STEL NIOSH

Butane
 200 ppm 1640 mg/m3 TLV NIOSH
 400 ppm 984 mg/m3 STEL ACGIH
 400 ppm 1000 mg/m3 PEL OSHA

Heptane

200 ppm 400 mg/m3 TLV ACGIH
 400 ppm 500 mg/m3 STEL ACGIH
 400 ppm 500 mg/m3 PEL OSHA
 400 ppm 500 mg/m3 REL NIOSH
 500 ppm 1225 mg/m3 STEL NIOSH

Propane

200 ppm 492 mg/m3 TLV ACGIH
 400 ppm 984 mg/m3 STEL ACGIH
 400 ppm 980 mg/m3 PEL OSHA
 400 ppm 1000 mg/m3 REL NIOSH
 500 ppm 1225 mg/m3 STEL NIOSH

Toluene

420 ppm 980 mg/m3 REL NIOSH
 320 ppm 560 mg/m3 STEL NIOSH

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid aerosol	Odor threshold	No information available
Appearance	clear	Odor	alcohol
Color	black		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No information available
Melting point/freezing point		No information available
Boiling point / boiling range		No information available
Flash point	below 73F	
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:		No information available
Lower flammability limit:		No information available
Vapor pressure	101.3mm/hg	
Vapor density		
Water solubility	Insoluble	
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties		No information available

Oxidizing properties

No information available

Other Information

Explosion severity

**Danger of Explosion, cloud
Minimum Ignition Energy, Cloud,
mJ**

No information available

**KST, (cloud), bar.m.s-1
Pmax maximum explosion
pressure, Cloud, bar**

No information available
No information available

**VMP, (cloud), bar.s-1
LOC Limiting Oxygen
Concentration, Cloud, %v/v O2**

No information available
No information available

**Softening point
Molecular weight
Density
Bulk density
Specific Gravity**

No information available
No information available
No information available
No information available

0.71@ 25C

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. High temperatures

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon Dioxide, Carbon Monoxide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Causes serious eye damage. Can be fatal if swallowed
Inhalation	Is a respiratory sensitizer.
Eye contact	Causes eye damage/irritation.
Skin Contact	Causes skin damage/irritation
Ingestion	Can be fatal if swallowed.

Information on toxicological effects

2-Propanol	LD50 Dermal	Rabbit	12800mg/kg
	LD50 Oral	Rat	5000 mg/kg
Butane/Heptane	LC50 Vapor Inhalation	Rat	658000mg/kg
	LC50 Gas Inhalation	Rat	48000mg/kg
Toluene	LC50 Inhalation	Rat	49g/l
	LD50 Oral	Rat	636 mg/kg

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization

Germ cell mutagenicity

Carcinogenicity

No information or data specific to the product on this toxicological (health) effect is available.

Reproductive toxicity

STOT - single exposure

No information or data specific to the product on this toxicological (health) effect is available.

STOT - repeated exposure	No information or data specific to the product on this toxicological (health) effect is available.
Target Organ Effects	Central nervous system, Eyes.
Aspiration hazard	No information or data specific to the product on this toxicological (health) effect is available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity – LC 50 Values

2-Propanol	Fish Rasbora Heteromorpha	4200mg/l	96 Hours
Heptane/Butanol	Fish Pimephales Promelas	173000 ug/l	96 Hours
Toluene	Fish Albumus Albumus	800000 ug/l	96 Hours

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name: Aerosols (flammable)

IMDG Aerosols(flammable). – **NOT A MARINE POLLUTANT**

IATA: Aerosols (flammable)

DOT, IMDG, IATA Primary Hazard Class: 2.1

DOT, IMDG, IATA Packing Group: II

Label Required 3

UN Number . **UN 1950**

15. REGULATORY INFORMATION

International Inventories

AICS	Yes
DSL	Yes
NDSL	No
IECSC	Yes
EINECS	Yes
ELINCS	No
ENCS	Yes
KECL	Yes
PICCS	Yes
TSCA	Yes (Registered Lautenberg 21st act)

NZIoC Yes

Legend:

- AICS - Australian Inventory of Chemical Substances
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- IECSC - China Inventory of Existing Chemical Substances
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
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SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

CERCLA

This material, as supplied, contains no substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 311/312 Hazardous

Yes
Eye Damage or Irritation, skin damage or irritation
Aspiration hazard, Flammable.

Classified hazard categories

California Prop 65

None

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 2	Flammability 3	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2*	Flammability 3	Physical hazards 0	Personal protection X

Revision Date 23-Apr-2019

Revision Note

[SDS sections updated \(***\) GHS Revision](#)

Disclaimer

The information provided above is intended as a guide to assist in the safe handling, use, processing, storage, transportation, disposal and release of the material listed. Nothing contained herein is to be considered as an express or implied warranty of performance or quality. The information relates only to the specific material designated and may not be applicable when such material is used in combination with any other materials or as part of any process, except as otherwise expressly described herein. The information is believed to be true and correct as of the date issued. Always make sure you are using the most current information available. The material described herein is produced for commercial and industrial use only and unless otherwise specifically designated by the manufacturer in writing has not received any specific regulatory approval such as approvals for food contact or for use in medical/surgical applications or devices. It is buyer and user's sole and exclusive responsibility to ensure that any handling, use, processing, storage, transportation, disposal and release of the material complies with all applicable laws, rules and regulations.

End of Safety Data Sheet