

(11258)

MATERIAL SAFETY DATA SHEET

DRI-GRAPH LUBE
03 00

DATE OF PREPARATION
Jan 27, 2015

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

DRI-GRAPH LUBE

PRODUCT NAME

DRI-GRAPH LUBE 1

MANUFACTURER'S NAME

Mfg. for:
Zircon Industries Inc.
P.O. Box 22483
Cleveland, OH 44122

APPROVED MATERIAL

MAY 14 2015
MSDS # 11258
APPROVED BY [Signature]

Telephone Numbers and Websites

Product Information	(800) 547-4328 www.liquidheat.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
14	106-97-8	Butane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
10	142-82-5	Heptane		
		ACGIH TLV	Not Available	620 mm
		OSHA PEL	Not Available	
22	426260-76-6	Heptane, branched, cyclic and linear		
		ACGIH TLV	Not Available	620 mm
		OSHA PEL	Not Available	
1	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
29	67-63-0	2-Propanol		
		ACGIH TLV	200 PPM	33 mm
		ACGIH TLV	400 PPM STEL	
		OSHA PEL	400 PPM	
1	71-36-3	1-Butanol		
		ACGIH TLV	20 PPM	5.5 mm
		OSHA PEL	50 ppm (Skin) CEILING	
1	107-98-2	1-Methoxy-2-propanol		
		ACGIH TLV	100 PPM	10.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
1	107-41-5	Hexylene Glycol		
		ACGIH TLV	25 PPM CEILING	0.046 mm
		OSHA PEL	Not Available	
5	7782-42-5	Graphite		
		ACGIH TLV	2 MG/M3	
		OSHA PEL	2.5 MG/M3	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
 EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes	
Health	2
Flammability	4
Reactivity	0

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
 Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
 Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
 Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT Propellant < 0 °F
LEL 1.0
UEL 13.7

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
 Application to hot surfaces requires special precautions.
 During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
 Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
 Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
 During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
 Consult NFPA Code. Use approved Bonding and Grounding procedures.
 Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	5.69 lb/gal	681 g/l
SPECIFIC GRAVITY	0.68	
BOILING POINT	<0 - 388 °F	<-18 - 197 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	98%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)	Volatile Weight 95.00% Less Water and Federally Exempt Solvents	

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

DRI-GRAPH LUBE**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
106-97-8	Butane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
142-82-5	Heptane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
426260-76-6	Heptane, branched, cyclic and linear	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
67-63-0	2-Propanol	LC50 RAT LD50 RAT	4HR	Not Available 5045 mg/kg
71-36-3	1-Butanol	LC50 RAT LD50 RAT	4HR	8000 ppm 790 mg/kg
107-98-2	1-Methoxy-2-propanol	LC50 RAT LD50 RAT	4HR	Not Available 6600. mg/kg
107-41-5	Hexylene Glycol	LC50 RAT LD50 RAT	4HR	Not Available 3700 mg/kg
7782-42-5	Graphite	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, Ems F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	1	
71-36-3	1-Butanol	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.