KANO LABORATORIES, INC.
SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: KROIL
Product Use: Penetrant/Lubricant for Industrial Use

Manufacturer: Kano Laboratories, Inc.
1000 E. Thompson Lane
Nashville, TN 37211
Emergency Phone Number: Chemtrec 1 (800) 424-9300
Manufacturer Phone Number: (615) 833-4101
Website: www.kanolabs.com

SDS Date of Preparation: July 12, 2019

SECTION 2: HAZARD IDENTIFICATION

GHS / HAZCOM 2012 Classification:

Health	**Physical**
Skin Irritation Category 2 Eye Irritation Category 2A Specific Target Organ Toxicity – Single Exposure Category 3 (Respiratory Irritation, CNS) Aspiration Hazard Category 1	Flammable Liquid 3

Label Elements

Danger!

Flammable Liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Keep container tightly closed.
Ground and bond container and receiving equipment
Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools.
Take precautionary measures against static discharge. Avoid breathing mist, vapors or spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, eye protection and face protection. IF SWALLOWED: Immediately call a POISON CENTER.
Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. If eye irritation persists: Get medical attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER if you feel unwell.
In case of fire: Use carbon dioxide, dry chemical or foam to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	%
LVP Aliphatic Hydrocarbon	64742-47-8	40-60
Severely Hydrotreated Petroleum Distillates	64742-52-5	30-50
Diisobutyl Ketone	108-83-8	5-15
Proprietary Ingredient	Proprietary	1-10
Dipropylene Glycol Monopropyl Ether	29911-27-1	1-5
Dipropylene Glycol Methyl Ether	88917-22-0	0-5
Aliphatic Alcohol #1	123-42-2	<3
Aliphatic Alcohol #2	78-83-1	<3

SECTION 4: FIRST AID MEASURES

Eye: Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

Skin: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention.

Ingestion: DO NOT induce vomiting. Keep the victim calm and warm. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

Most important symptoms and effects, acute and delayed: May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, nausea and vomiting. Harmful or fatal if swallowed. Aspiration into the lungs during ingestion or vomiting may cause lung damage. May cause chronic effects.

Indication of immediate medical attention and special treatment, if needed: If swallowed, get immediate medical attention.

SECTION 5: ACCIDENTAL RELEASE MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use carbon dioxide, dry chemical or foam. Water may be ineffective but can be used to cool containers and structures.

Specific Hazards Arising from the Chemical: Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Never use welding or cutting torch on or near containers (even empty) because product can ignite explosively. Combustion products may be hazardous.

Special Protective Equipment and Precautions for Fire-fighters: Wear NIOSH approved positive pressure,

self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment, and Emergency procedures: Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed.

Environmental precautions: Avoid release to the environment. Report spills and releases as required to appropriate authorities.

Methods and Materials for Containment and Cleaning up: Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Ventilate area. Cover with an inert absorbent material and collect into an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash exposed skin thoroughly with soap and water after use. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas.

OTHER PRECAUTIONS: Do not cut, braze, solder, grind or weld empty containers. Do not reuse containers. Follow all SDS precautions in handling empty containers.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, well-ventilated location away from oxidizing agents and other incompatible materials. Keep containers closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
LVP Aliphatic Hydrocarbon	5 mg/m^3 TWA OSHA PEL 5 mg/m^3 TWA ACGIH TLV(inhalable fraction)
Severely Hydrotreated Petroleum Distillates	500 ppm TWA OSHA PEL (As stoddard solvent) 200 ppm TWA ACGIH TLV (as kerosene)
Diisobutyl Ketone	50 ppm TWA OSHA PEL 25 ppm TWA ACGIH TLV
Proprietary Ingredient	None Established
Dipropylene Glycol Monopropyl Ether	None Established
Dipropylene Glycol Methyl Ether	None Established
Aliphatic Alcohol #1	50 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV
Aliphatic Alcohol #2	100 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain concentrations below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

Personal Protective Equipment:

Respiratory Protection: If needed, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures, a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Hand protection: Impervious gloves are recommended when needed to avoid skin contact.

Eye Protection: Chemical safety goggles recommended.

Skin Protection: Impervious clothing as required to prevent skin contact and contamination of personal clothing.

Hygiene measures: Suitable eye wash and washing facilities should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slightly reddish liquid	**Odor:**	Solvent
Odor Threshold:	Not available	**pH:**	Not available
Melting/Freezing Point:	Not available	**Boiling Point/Range:**	Not available
Flash Point:	132°F (55.5ºC) TOC	**Evaporation Rate:**	Not available
Flammability: (Solid, Gas)	Not applicable	**Flammability Limits:**	UEL: 10.9% (isobutanol) LEL: 0.7% (light petroleum distillates)
Vapor Pressure:	Not available	**Vapor Density:**	Not available
Relative Density:	0.8596	**Solubilities:**	Negligible in Water
Partition Coefficient: (N-Octanol/Water)	Not available	**Autoignition Temperature:**	Not available
Decomposition Temperature:	Not available	**Viscosity:**	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known.
Chemical Stability: Stable under normal conditions of storage or use.
Possibility of Hazardous Reactions: None known.
Conditions to avoid: Avoid heat, sparks, flames and all other sources of ignition.
Incompatible Materials: Avoid strong oxidizing agents, reducing agents, acids and bases.
Hazardous decomposition products: Combustion will produce oxides of carbon, acetone, acrid fumes and smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eye: May cause eye irritation with redness, tearing and stinging.

Skin: May cause irritation with redness, rash, swelling. Prolonged or repeated contact may result in defatting and dermatitis.

Inhalation: Inhalation of vapors or mists may cause mucous membrane and upper respiratory tract irritation and central nervous system depression. Symptoms may include coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea, fatigue and unconsciousness.

Ingestion: Swallowing may cause gastrointestinal irritation with abdominal pain, nausea, vomiting and diarrhea and central nervous system depression with symptoms including headache, dizziness, intoxication, weakness, nausea, and vomiting. Aspiration into the lungs during ingestion or vomiting may cause lung damage.

Chronic Hazards: Prolonged or repeated exposure may cause damage to the central nervous system, kidney and liver.

Carcinogen Status: None of the components of this product at greater than 0.1% are listed as carcinogens by OSHA, IARC or NTP.

Acute toxicity: Toxicological testing has not been performed on this product as a mixture.
Acute Toxicity Estimate: Oral 35 714 mg/kg, Inhalation >5 mg/kg, Dermal >2000 mg/kg
LVP Aliphatic Hydrocarbon: Oral rat LD50 > 5000 mg/kg; Dermal rat LD50 > 5000 mg/kg Inhalation rat LC50 > 2.18 mg/L/4 hr.
Severely Hydrotreated Petroleum Distillates: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.28 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg
Diisobutyl Ketone: Oral rat LD50 5233 mg/kg; Dermal rat LD50 > 2000 mg/kg; Inhalation rat LC50 14.5 mg/L/4 hr.
Proprietary Ingredients: Oral rat LD50 2760 mg/kg; Dermal rabbit LD50 >2000 mg/kg
Dipropylene Glycol Monopropyl Ether: Oral rat LD50 >2000 mg/kg Dermal rabbit LD50 >2000 mg/kg. Dipropylene Glycol Methyl Ether: Oral rat LD50 >5000 mg/kg, Dermal rat LD50 >2000 mg/kg, Inhalation rat LD50 >5.7 mg/L/4 hr
Aliphatic Alcohol #1: Oral rat LD50 3002 mg/kg; Dermal rat LD50 > 1875 mg/kg; Inhalation rat LC50> 7.6 mg/L/4 hr.
Aliphatic Alcohol #2: Oral rat LD50 > 2830 mg/kg; Inhalation rat LC50 24.6 mg/L/4 hr.; Dermal rabbit LD50 > 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No toxicity data available for the product.
LVP Aliphatic Hydrocarbon: 96 hr. LC50 Pimephales promelas > 100 mg/L; 48 hr. EC50 daphnia magna>1000 mg/L; 72 hr. EC50 Pseudokirchnerella subcapitata > 100 mg/L
Severely Hydrotreated Petroleum Distillates: 96 hr LL50 Oncorhynchus mykiss 2.5 mg/kg, 48 hr EL50 daphnia magna 1.4 mg/L, 72 hr EL50 Pseudokirchnerella subcapitata 1.3 mg/L
Diisobutyl Ketone: 96 hr. LC50 Oncorhynchus mykiss 30 mg/L; 48 hr. EC50 daphnia magna 37.2 mg/L, 72 hr. EC50 Pseudokirchnerella subcapitata 46.9 mg/L
Proprietary Ingredients: 96 hr. LC50 Oncorhynchus mykiss 18350 ug/L
Dipropylene Glycol Monopropyl Ether: 96 hr LC50 Oncorhynchus mykiss >100 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 96 hr EC50 Pseudokirchneriella subcapitata >1000 mg/L
Dipropylene Glycol Methyl Ether: 96 hr LC50 Oncorhynchus mykiss 110.2 mg/L, 48 hr LC50 daphnia magna 2701 mg/L, 72 hr EC50 Pseudokirchneriella subcapitata >1000 mg/L
Aliphatic Alcohol #1: 96 hr. LC50 Oryzias latipes >100 mg/L; 48 hr. EC50 daphnia magna >1000 mg/L; 72 hr. EC50 Pseudokirchnerella subcapitata>1000 mg/L
Aliphatic Alcohol #2: 96 hr LC50 Pimephales promelas 1430 mg/L; 48 hr EC50 daphnia pulex 1100 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 1799 mg/L

Persistence and Degradability: Aliphatic alcohol #1 and aliphatic alcohol #2 are readily biodegradable. Petroleum Distillates, hydrotreated light and Distillates, Hydrotreated Light Naphthenic are not readily biodegradable.

B**ioaccumulative Potential:** Aliphatic alcohol #1 has a calculated BCF of 0.5. Diisobutyl Ketone has a calculated BCF of 7. Aliphatic Alcohol #2 has a calculated BCF of 3

Mobility in Soil: Aliphatic alcohol #1, aliphatic alcohol #2 and diisobutyl ketone have a high to very high mobility in soil.

Other Adverse Effects: None known

SECTION 13: DISPOSAL INFORMATION

Disposal instructions: Dispose of product in accordance with all local, state/provincial and federal regulations.

Contaminated packaging: Offer rinsed packaging material to local recycling facilities.

SECTION 14: TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT (in containers <119 gallons)		Excepted from Hazmat			
DOT (in containers> 119 gallons	UN1993	Flammable liquid, n.o.s. (Aliphatic Alcohols, Petroleum Distillates)	3	PGIII	None
DOT Air	UN1993	Flammable liquid, n.o.s. (Aliphatic Alcohols, Petroleum Distillates)	3	PGIII	None
TDG (in containers <119 gallons		Not regulated in small means of containment			
TDG (in containers > 119 gallons	UN1993	Flammable liquid, n.o.s. (Aliphatic Alcohols, Petroleum Distillates)	3	PGIII	None
IMDG	UN1993	Flammable liquid, n.o.s. (Aliphatic Alcohols, Petroleum Distillates)	3	PGIII	None
IATA	UN1993	Flammable liquid, n.o.s. (Aliphatic Alcohols, Petroleum Distillates)	3	PGIII	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product has a Reportable Quantity (RQ) of 166,666 lbs. (based on the RQ for Aliphatic alcohol #2 of 5,000 lbs present at 3%) maximum. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

STATE REPORTING REGULATIONS:

Massachusetts Right To Know: Diacetone Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8

New Jersey Right To Know: Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8, Pine Oil 8002-09-3

Pennsylvania Right To Know: Diacetore Alcohol 123-42-2, Isbutanol 78-83-1, Diisobutyl Ketone 108-83-8

SARA TITLE III:

Hazard Category for Section 311/312: Refer to Section 2 for the OSHA Hazard Classification.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None.

Section 302 Extremely Hazardous Substances (TPQ): None

International Chemical Inventories

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

Canadian DSL: All of the components of this product are listed on the Canadian Domestic Substances List

SECTION 15: OTHER INFORMATION

HMIS Ratings:	Health - 2	Flammability - 2	Reactivity - 0
NFPA Ratings:	Health - 1	Flammability - 2	Reactivity - 0

SDS Revision History: Sections 3, 8, 11, 12, 15
Date of Preparation: July 12, 2019
Date of last revision: June 6, 2018

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