





**KANO LABORATORIES, INC.  
SAFETY DATA SHEET**

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**Manufacturer:** Kano Laboratories, Inc.  
1000 E. Thompson Lane  
Nashville, TN 37211  
**Information Phone Number:** (615) 833-4101  
**Fax:** (615) 833-5790  
**Website:** [www.kanolaboratories.com](http://www.kanolaboratories.com)  
**Emergency Telephone No.** 800-424-9300 (Chemtrec)

HMIS Hazard Rating

	HEALTH	2
	FLAMMABILITY	3
	REACTIVITY	0
	PERSONAL_PROTECTION	X

**Product Name:** KREEN  
**MSDS Date of Preparation:** 12/14/2010  
**Product Use:** Internal Combustion Engine Cleaner for Industrial Use

**SECTION 2: HAZARDS IDENTIFICATION**

Clear liquid with a solvent odor.

**EMERGENCY OVERVIEW**

**DANGER!** Flammable Liquid and Vapor. May cause eye and skin irritation. May be harmful if absorbed through the skin. 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.

**Potential Health Effects:**

**Eye:** May cause eye irritation with redness, tearing and stinging. Corneal injury is possible if not promptly removed.

**Skin:** May cause irritation with redness, rash, swelling. Prolonged or repeated contact may result in defatting and dermatitis. May be absorbed through the skin with effects similar to inhalation and ingestion.

**Inhalation:** Inhalation of vapors or mists may cause mucous membrane and upper respiratory tract irritation and central nervous system depression. Symptoms may include burning sensation, coughing, wheezing, sore throat, shortness of breath, headache, dizziness, drowsiness, nausea, vomiting, depressed respiration and heart rate, heart rhythm irregularities 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, respiratory failure, convulsions, cardiovascular collapse and pulmonary edema. 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, blood, kidney and liver. This product contains chemicals that in animal studies caused harm to the developing fetus, but only at exposure levels that harm the pregnant animal. There is no evidence of adverse fetal or reproductive effects in humans.

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

**Medical Conditions Aggravated by Exposure:** Pre-existing eye, skin, respiratory, heart, central nervous system, liver and kidney disorders.

<b>SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS</b>
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Chemical Name	CAS#	%
Severely Hydrotreated Petroleum Distillates	64742-52-5	15-25
Aliphatic Petroleum Distillates	64742-95-6/64742-88-7	15-25
Aliphatic Alcohols	78-92-2/123-42-2	15-25
Glycol Ether	111-76-2	5-15
Aliphatic Ketone	78-93-3	5-15
Proprietary Ingredients	Proprietary	5-15

<b>SECTION 4: FIRST AID MEASURES</b>
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**Eye:** Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get immediate medical attention.

**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 immediate 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.

<b>SECTION 5: FIRE FIGHTING MEASURES</b>
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**Flash Point:** 75°F (24°C) COC

**Flammable Limits:** LEL: 1.1%  
UEL: 12.0%

**Autoignition Temperature:** Not Determined

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

**Special Fire Fighting Procedures:** Wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

**Unusual Fire Hazards:** 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.

**Hazardous Decomposition Products:** Oxides of carbon, organic compounds, smoke and fumes.

<b>SECTION 6: ACCIDENTAL RELEASE MEASURES</b>
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**Spill:** Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed (refer to Section 8 for specific recommendations). Ventilate area. Cover with an inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

<b>SECTION 7: HANDLING AND STORAGE</b>
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**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. Keep containers closed when not in use. Do not cut, braze, solder, grind or weld empty containers. Do not reuse containers. Follow all MSDS precautions in handling empty containers.

**Storage:** Store in a cool, dry, well-ventilated location away from incompatible materials. Keep containers closed.

<b>SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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Chemical Name	Exposure Limits
Severely Hydrotreated Petroleum Distillates	5 mg/m <sup>3</sup> OSHA PEL-TWA 5 mg/m <sup>3</sup> ACGIH TLV-TWA 10 mg/m <sup>3</sup> ACGIH TLV-STEEL
Aliphatic Petroleum Distillates	100 ppm OSHA PEL-TWA 100 ppm ACGIH TLV-TWA
Aliphatic Alcohol	150 ppm OSHA PEL-TWA 100 ppm ACGIH TLV-TWA
Aliphatic Alcohol	50 ppm OSHA PEL-TWA 50 ppm ACGIH TLV-TWA
Glycol Ether	50 ppm OSHA PEL-TWA 20 ppm ACGIH TLV-TWA
Aliphatic Ketone	200 ppm OSHA PEL-TWA 200 ppm ACGIH TLV-TWA 300 ppm ACGIH TLV-STEEL
Proprietary Ingredients	None Established

**Ventilation:** 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.

**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.

**Skin Protection** Impervious gloves are recommended when needed to avoid skin contact. Based on available test data, 4H or Silver Shield gloves are suggested.

**Eye Protection:** Chemical safety goggles recommended.

**Other Protective Equipment:** Impervious clothing as required to prevent skin contact and contamination of personal clothing. Suitable eye wash and washing facilities should be available in the work area.

<b>SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES</b>
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**Appearance and Odor:** Clear liquid with a solvent odor.

**pH:** Not applicable

**Boiling Point:** 182°F

**Vapor Pressure:** 71 mm Hg @ 20°C (aliphatic ketone)

**Vapor Density (air =1):** Greater than 1

**Specific Gravity:** 0.8639

**Melting Point:** Not applicable

**Water Solubility:** Moderate

**Evaporation Rate (ether=1):** Less than 1

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable under normal conditions of storage or use.

**Incompatibility/Conditions to Avoid:** Avoid strong oxidizing agents, reducing agents, acids, bases, amines, alkanolamines, ammonia, chlorinated compounds. Avoid heat, sparks, flames and all other sources of ignition.

**Hazardous Decomposition Products:** Combustion will produce oxides of carbon, organic compounds, smoke and fumes.

**Hazardous Polymerization:** Will not occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicological testing has not been performed on this product as a mixture.

The calculated acute toxicity values, as determined by the DOT and other agency standard formula are: Oral LD50 = 1852; Dermal LD50 = 1200 mg/kg. Kreen is not classified as toxic under workplace or transportation criteria.

**SECTION 12: ECOLOGICAL INFORMATION**

No data available.

**SECTION 13: DISPOSAL INFORMATION**

Dispose in accordance with all local, state and federal regulations.

**SECTION 14: TRANSPORT INFORMATION**

Note: Containers of 1 liter or less can be re-named "Consumer Commodity" and re-classed as ORM-D.

**DOT Shipping Name:** Flammable liquid, n.o.s. (Aliphatic Alcohols, Aliphatic Ketone, Petroleum Distillates)

**DOT Hazard Class/Packing Group:** 3, II

**UN Number:** UN1993

**DOT Labels Required (49CFR172.101):** Flammable Liquid

**Hazardous Substance (49CFR172.101):** Methyl Ethyl Ketone

**Reportable Quantity:** 33,300 lbs

**DOT Marine Pollutants:** This product does not contain marine pollutants as defined in 49CFR 171.8.

**IATA Shipping Name:** Flammable liquid, n.o.s. (Aliphatic Alcohols, Aliphatic Ketone, Petroleum Distillates)

**IATA Hazard Class/Packing Group:** 3, II

**UN Number:** UN1993

**IATA Hazard Labels Required:** Class 3

**SECTION 15: REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS:**

**CERCLA 103 Reportable Quantity:** Kreen – 33,300 lbs based on the RQ for aliphatic ketone (5000 lbs) present at 15% maximum. . Many states have more stringent reporting requirements. Report spills and other releases as required under federal, state and local regulations.

**SARA TITLE III:****Hazard Category for Section 311/312:** Acute Health, Chronic Health, Fire Hazard**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Aliphatic Alcohol	78-92-2	5-25%
Glycol Ether	111-76-2	5-20%
Aliphatic Ketone	78-93-3	5-15%
1,2,4-Trimethylbenzene	95-63-6	5% max

**Section 302 Extremely Hazardous Substances (TPQ):** None**EPA Toxic Substances Control Act (TSCA) Status:** All of the components of this product are listed on the TSCA inventory.**SECTION 16: OTHER INFORMATION****HMIS Ratings:** Health - 2

Flammability - 3

Reactivity - 1

**NFPA Ratings:** Health - 1

Flammability - 3

Reactivity - 1

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The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or the consequences of its use or misuse.

**Title:** Chairman**Name (print):** P. R. Zimmerman**Date:** February 1, 2005**Signature:** *P. R. Zimmerman*