



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKEN

Kardol Quality Products
9933 Alliance Rd
Cincinnati, OH 45242

SDS Information Number 1-800-252-7365
Telephone 1-513-933-8206
Emergency Telephone Number 1-800-424-9300

Product Name Gun Cleaner/Wash
Product Code 150490, 150492, 150496
Product Use or Description No Data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: Liquid

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF INHALED. HARMFUL IF SWALLOWED. MAY CAUSE BLINDNESS. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS.

Potential Health Effects

Exposure Routes: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion.

Eye Contact: Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin Contact: Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion: Swallowing this material may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8).

Aggravated Medical Condition: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Skin, Upper respiratory tract, lung (for example, asthma-like conditions), Liver, Kidney, Central nervous system, pancreas, Heart, blood-forming system, auditory system, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), runny nose, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, temporary changes in mood and behavior, muscle cramps, pain in the abdomen and lower back, Blurred vision, Shortness of breath, Lack of coordination, confusion, irregular heartbeat, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), high blood sugar, visual impairment (including blindness), coma.

Target Organs: Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans., This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals., Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage., Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene., Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone., Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible kidney effects, blood abnormalities, liver abnormalities, respiratory tract damage (nose, throat, and airways), central nervous system damage, effects on hearing, central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: kidney damage, visual impairment.

Carcinogenicity: This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard: Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans., Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain., This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
TOLUENE	108-88-3	>=10-<30%
METHANOL	67-56-1	>=20-<40%
SOLVENT NAPHTHA (PETROLEUM), LIGHT	64742-89-8	>=5-<20%
ACETONE	108-65-6	>=30-<45%

4. FIRST AID MEASURES

Eyes: If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin: Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Notes to Physician

Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, Carbon dioxide (CO₂), Water spray.

Hazardous Combustion Products: Carbon dioxide and carbon monoxide, Hydrocarbons, Aldehydes, organic compounds.

Precaution For Fire-Fighting: Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire fighters. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification: Flammable Liquid Class IB

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Ensure adequate ventilation. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

Environmental Precautions: Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for Clean Up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other Information: Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

7. HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Storage: Store in a cool, dry, ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Toluene		108-88-3
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	375 mg/m ³
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	560 mg/m ³
OSHA Z2	time weighted average	200 ppm
OSHA Z2	Ceiling Limit Value:	300 ppm
OSHA Z2	Maximum concentration:	500 ppm
Acetone		67-64-1
ACGIH	8-hour, time-weighted average	750 ppm
NIOSH	Short-term exposure limit	250 ppm
NIOSH	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek	590 mg/m ³
OSHA	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek	1,000 ppm
OSHA	8-hour time weighted average	2,400 mg/m ³
OSHA	8-hour time weighted average	750 ppm
OSHA	8-hour time weighted average	1,800 mg/m ³
OSHA	8-hour time weighted average	1,000 ppm
OSHA	8-hour time weighted average	2400 mg/m ³
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC		64742-89-8

OSHA Z1	time weighted average	500 ppm
ACGIH	time weighted average	300 ppm
OSHA Z1	time weighted average	2,000 mg/m3
ACGIH	time weighted average	1,370 mg/m3

METHANOL

67-56-1

ACGIH	time weighted average	200 ppm
ACGIH	Short term exposure limit	250 ppm
NIOSH	Recommended exposure limit (REL):	200 ppm
NIOSH	Recommended exposure limit (REL):	260 mg/m3
NIOSH	Short term exposure limit	250 ppm
NIOSH	Short term exposure limit	325 mg/m3
OSHA Z1	Permissible exposure limit	200 ppm
OSHA Z1	Permissible exposure limit	260 mg/m3

General Advice: These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye Protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and Body Protection: Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear.

Respiratory Protection: A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	liquid
Colour	Water-white
Odour	no data available
Boiling point/boiling range	133 °F / 56 °C @ 1,013.23 hPa Calculated Phase Transition Liquid/Gas
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	(>=)-4 °F / -20 °C
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	1.27 %(V) / 36 %(V) Calculated Explosive Limit
Particle size	no data available
Vapour pressure	307.969 hPa @ 77 °F / 25 °C Calculated Vapor Pressure
Relative vapour density	no data available
Density	6.850 lb/gal @ 68 °F / 20 °C
Bulk density	No data
Water solubility	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	No Data

Minimum ignition energy no data available

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Heat, flames and sparks.

Incompatible Products: Acids, alkalis, aluminum, Amines, Ammonia, halogens, Lead, peroxides, Reducing agents, sodium, strong bases, Strong oxidizing agents, Zinc.

Hazardous Decomposition Products: carbon dioxide and carbon monoxide, Hydrocarbons, formaldehyde, Aldehydes, organic compounds.

Hazardous Reactions: Product will not undergo hazardous polymerization.

Thermal decomposition: No Data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

TOLUENE	LD 50 Rat: 2.6 g/kg
METHANOL	LD LO Human: 300 mg/kg
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LD 50 Rat: > 8,000 mg/kg
Acetone	LD 50 Rat: 5,800 mg/kg

Acute inhalation toxicity

TOLUENE	LC 50 Rat: 8000 ppm; 4 h LC 50 Rat: 8,000 mg/l; 4 h LC 50 Rat: 12,200 mg/l; 2 h LC 50 Rat: 64000 ppm; 4 h
METHANOL	
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LC 50 Rat: 3400 ppm; 4 h
Acetone	LC 50 Rat: > 16000 ppm; 4 h

Acute dermal toxicity

TOLUENE	LD 50 Rabbit: 12,124 mg/kg
METHANOL	LD 50 Rabbit: 12,800 mg/kg
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LD 50 Rat: > 4,000 mg/kg
Acetone	LD 50 Rabbit: > 20,000 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

TOLUENE	no data available
METHANOL	99% Exposure time: 28 d Method: OECD Test Guideline 301D
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

Bioaccumulation

TOLUENE	Species: Ide, silver or golden orfe (Leuciscus idus) Exposure time: 3 d Dose: 0.05 mg/l Bioconcentration factor (BCF): 94 Method: Not reported
METHANOL	Species: Green algae (Chlorella fusca vacuolata) Exposure time: 24 h Dose: 0.05 mg/l Bioconcentration factor (BCF): 28,400 Method: Static
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
ACETONE	no data available

Ecotoxicity effects

Toxicity to fish

TOLUENE	96 h Renewal LC 50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 5.80 mg/l 96 h static test LC 50 Fathead minnow (Pimephales promelas): 12.60 mg/l trout (Oncorhynchus mykiss): 18,000.00 - 20,000.00 mg/l
METHANOL	
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	96 h static test LC 50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 4,740.00 - 6,330.00 mg/l 96 h static test LC 50 Bluegill (Lepomis macrochirus): 8,300.00 mg/l 96 h flow-through test LC 50 Fathead minnow (Pimephales promelas): 8,733.00 - 9,482.00 mg/l

Toxicity to daphnia and other aquatic invertebrates:

TOLUENE	48 h static test EC 50 Water flea (Daphnia magna): 6.00 mg/l
METHANOL	48 h static test EC 50 Water flea (Daphnia magna): > 10,000.00 mg/l
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

Toxicity to algae

TOLUENE	no data available
Acetone	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available

Toxicity to Bacteria

TOLUENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

Biochemical Oxygen Demand (BOD)

TOLUENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

Chemical Oxygen Demand (COD)

TOLUENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

Additional ecological information

TOLUENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
Acetone	no data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Kardol's Environmental Services at 800-252-7365.

14. TRANSPORT INFORMATION**REGULATION**

ID Number /	Proper Shipping Name /	*Hazard Class /	Subsidiary Hazards /	Packing Group /	Packing Group/ Marine Pollutant	LTD QTY
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U.S. DOT - ROAD

U.N.	1263	PAINT RELATED MATERIAL	3	II
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U.S. DOT - RAIL

U.N. 1263	PAINT RELATED MATERIAL	3	II
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U.S. DOT - INLAND WATERWAYS

U.N. 1263	PAINT RELATED MATERIAL	3	II
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TRANSPORT CANADA - ROAD

U.N. 1263	PAINT RELATED MATERIAL	3	II
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TRANSPORT CANADA - RAIL

U.N. 1263	PAINT RELATED MATERIAL	3	II
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TRANSPORT CANADA - INLAND WATERWAYS

U.N. 1263	PAINT RELATED MATERIAL	3	II
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INTERNATIONAL MARITIME DANGEROUS GOODS

U.N. 1263	PAINT RELATED MATERIAL	3	II
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

U.N. 1263	PAINT RELATED MATERIAL	3	II
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

U.N. 1263	PAINT RELATED MATERIAL	3	II
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

U.N. 1263	PAINT RELATED MATERIAL	3	II
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***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION**California Prop. 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.	ETHYL BENZENE NAPHTHALENE BENZENE
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	TOLUENE BENZENE

SARA Hazard Classification

Fire Hazard Acute Chronic
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s)

TOLUENE	50.10%
METHANOL	30.00%

New Jersey RTK Label Information

METHANOL	67-56-1
TOLUENE	108-88-3
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8
Acetone	67-64-1

Pennsylvania RTK Label Information

METHANOL	67-56-1
TOLUENE	108-88-3
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8
Acetone	67-64-1
Benzene	71-43-2

Notification status

EU. EINECS	y (positive listing)
US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive listing)
Japan. Kashin-Hou Law List	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)	1999 lbs
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Reportable quantity-Components

TOLUENE	108-88-3	1000 lbs
	HMIS	NFPA
Health	2*	2
Flammability	3	3
Physical hazards	0	0
Instability	0	0
Specific Hazard	0	0

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Kardol's Environmental Health and Safety Department (1-800-252-7365).