



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 Kardol 10/Acrylic Laquer Thinner
Product Code 150900, 150901, 150902, 150904, 150906
Product Use or Description Multi-Purpose Cleaner

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: Liquid, Green in Color

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

Potential Health Effects

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

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

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. It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

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, male reproductive 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: redness of the skin, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Cough, discomfort in the chest, Lung irritation, 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, effects on memory, muscle cramps, Lowered blood pressure, pain in the abdomen and lower back, respiratory depression (slowing of the breathing rate), Blurred vision, Shortness of breath, Lack of coordination, confusion, Difficulty in breathing, irregular heartbeat, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), Bloody urine, blood abnormalities (breakage of red blood cells), narcosis (dazed or sluggish feeling), lung edema (fluid buildup in the lung tissue), kidney damage, liver damage, visual impairment (including blindness), coma.

Target Organs: Acute lethal exposure to ethylene glycol monobutyl ether in animal studies has resulted in congestion of organs including kidney, spleen, and lung., 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., Breathing isopropanol vapors has caused damage to the lining of the middle ear in experimental animals. The relevance of this finding to humans is uncertain., 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 spleen effects, blood abnormalities, cardiac sensitization, anemia, effects on male fertility, nasal damage, respiratory tract damage (nose, throat, and airways), testis damage, kidney damage, liver damage, 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: central nervous system effects, kidney damage, visual impairment

Carcinogenicity: Ethylbenzene has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. The International Agency for Research on Cancer (IARC) has classified ethylbenzene as a possible human carcinogen. Ethylene glycol monobutyl ether has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. n-Propanol caused an increased cancer incidence in rats when administered by injection or by placing the material into the stomach. Problems with these studies, including inadequate evaluation of the data, prevent their use in evaluating n-propanol for carcinogenicity. n-Propanol is not listed as carcinogenic by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard: This material (or a component) may be harmful to the human fetus based on positive test results with laboratory animals., This material was not harmful to the fetus in laboratory animal studies., 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
TOLUENE	108-88-3	>=40-50%
ISOPROPANOL	67-63-0	>=5-<10%
DIACETONE ALCOHOL	123-42-2	>=5-<10%
PROPYL ACETATE, NORMAL	109-60-4	>=5-<10%
PROPANOL, NORMAL	71-23-8	>=5-<10%
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	>=5-<10%
XYLENE	1330-20-7	>=1.5-<5%
1-METHOXY-2-PROPANOL	107-98-2	>=1.5-<5%
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	>=1.5-<5%
ETHYL ACETATE	141-78-6	>=1.5-<5%
ETHYL BENZENE	100-41-4	>=1-<1.5%
METHANOL	67-56-1	>=1-<1.5%
SOLVENT NAPHTHA (PETROLEUM), LIGHT	64742-89-8	>=1-<1.5%
PROPYLENE GLYCOL MONOMETHYL ETHER	108-65-6	>=1-<1.5%
DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0	>=1-<1.5%

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. Administration of high doses of isopropanol in combination with known hepatotoxic chemicals resulted in enhanced liver toxicity in experimental animals. 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.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

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

Hazardous Combustion Products: Acrid smoke and fumes, Aldehydes, carbon dioxide and carbon monoxide, Hydrocarbons, Ketones, Organic acids, organic compounds, Acetone.

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/m3
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	560 mg/m3
OSHA Z2	time weighted average	200 ppm
OSHA Z2	Ceiling Limit Value:	300 ppm
OSHA Z2	Maximum concentration:	500 ppm

ISOPROPANOL		67-63-0
ACGIH	time weighted average	200 ppm
ACGIH	Short term exposure limit	400 ppm
NIOSH	Recommended exposure limit (REL):	400 ppm
NIOSH	Recommended exposure limit (REL):	980 mg/m3
NIOSH	Short term exposure limit	500 ppm
NIOSH	Short term exposure limit	1,225 mg/m3
OSHA Z1	Permissible exposure limit	400 ppm
OSHA Z1	Permissible exposure limit	980 mg/m3
DIACETONE ALCOHOL		123-42-2
ACGIH	time weighted average	50 ppm
NIOSH	Recommended exposure limit (REL):	50 ppm
NIOSH	Recommended exposure limit (REL):	240 mg/m3
OSHA Z1	Permissible exposure limit	50 ppm
OSHA Z1	Permissible exposure limit	240 mg/m3
PROPYL ACETATE, NORMAL		109-60-4
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):	840 mg/m3
NIOSH	Short term exposure limit	250 ppm
NIOSH	Short term exposure limit	1,050 mg/m3
OSHA Z1	Permissible exposure limit	200 ppm
OSHA Z1	Permissible exposure limit	840 mg/m3
PROPANOL, NORMAL		71-23-8
ACGIH	time weighted average	100 ppm
NIOSH	Recommended exposure limit (REL):	200 ppm
NIOSH	Recommended exposure limit (REL):	500 mg/m3
NIOSH	Short term exposure limit	250 ppm
NIOSH	Short term exposure limit	625 mg/m3
OSHA Z1	Permissible exposure limit	200 ppm
OSHA Z1	Permissible exposure limit	500 mg/m3
ETHYLENE GLYCOL MONOBUTYL ETHER		111-76-2
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	5 ppm
NIOSH	Recommended exposure limit (REL):	24 mg/m3
OSHA Z1	Permissible exposure limit	50 ppm
OSHA Z1	Permissible exposure limit	240 mg/m3
XYLENE		1330-20-7
ACGIH	time weighted average	100 ppm
ACGIH	Short term exposure limit	150 ppm
OSHA Z1	Permissible exposure limit	100 ppm
OSHA Z1	Permissible exposure limit	435 mg/m3
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	435 mg/m3
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	655 mg/m3
1-METHOXY-2-PROPANOL		107-98-2
ACGIH	time weighted average	100 ppm
ACGIH	Short term exposure limit	150 ppm
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	360 mg/m3
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	540 mg/m3
DIPROPYLENE GLYCOL MONOMETHYL ETHER		34590-94-8
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	600 mg/m3

NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	900 mg/m3
OSHA Z1	Permissible exposure limit	100 ppm
OSHA Z1	Permissible exposure limit	600 mg/m3
ACGIH	time weighted average	100 ppm
ACGIH	Short term exposure limit	150 ppm
ETHYL ACETATE		141-78-6
ACGIH	time weighted average	400 ppm
NIOSH	Recommended exposure limit (REL):	400 ppm
NIOSH	Recommended exposure limit (REL):	1,400 mg/m3
OSHA Z1	Permissible exposure limit	400 ppm
OSHA Z1	Permissible exposure limit	1,400 mg/m3
ETHYL BENZENE		100-41-4
ACGIH	time weighted average	100 ppm
ACGIH	Short term exposure limit	125 ppm
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	435 mg/m3
NIOSH	Short term exposure limit	125 ppm
NIOSH	Short term exposure limit	545 mg/m3
OSHA Z1	Permissible exposure limit	100 ppm
OSHA Z1	Permissible exposure limit	435 mg/m3
ACGIH NIC	time weighted average	20 ppm
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
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
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE		108-65-6
WEEL	time weighted average	50 ppm
DIETHYLENE GLYCOL MONOETHYL ETHER		111-90-0
WEEL	time weighted average	25 ppm
WEEL	time weighted average	140 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. Maintain eye wash station near work area.

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	132.89 °F / 56.05 °C @ 1,013.25 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 Tag closed cup
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	1 %(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	0.873 g/cm ³ 7.270 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. Exposure to air or moisture over prolonged periods., Do not allow evaporation to dryness., excessive heat.

Incompatible Products: acid anhydrides, Acids, Aldehydes, aluminum, Amines, Ammonia, Bases, chlorates, Chlorine, Ethylene oxide, halogenated hydrocarbons, halogens, hydroxides, isocyanates, Lead, nitrates, Oxidizing agents, Oxygen, peroxides, salts of strong bases, silica, sodium, strong bases, Zinc, Do not use with aluminum equipment at temperatures above 120 degrees F.

Hazardous Decomposition Products: acrid smoke and fumes, Aldehydes, carbon dioxide and carbon monoxide, formaldehyde, Hydrocarbons, Organic acids, organic compounds, ketones.

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
ISOPROPANOL	no data available
DIACETONE ALCOHOL	LD 50 Rat: 4,000 mg/kg
PROPYL ACETATE, NORMAL	LD 50 Rat: 9,370 mg/kg
PROPANOL, NORMAL	LD 50 Rabbit: 2,800 mg/kg
ETHYLENE GLYCOL MONOBUTYL ETHER	LD 50 Guinea pig: 1.2 g/kg
XYLENE	LD 50 Rat: 4,300 mg/kg

1-METHOXY-2-PROPANOL	LD 50 Rat: 7,200 mg/kg
DIPROPYLENE GLYCOL MONOMETHYL ETHER	LD 50 Rat: 5,135 mg/kg
ETHYL ACETATE	no data available
ETHYL BENZENE	LD 50 Rat: 3,500 mg/kg
METHANOL	LD LO Human: 300 mg/kg
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LD 50 Rat: > 8,000 mg/kg
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LD 50 Rat: 8,532 mg/kg
DIETHYLENE GLYCOL MONOETHYL ETHER	LD 50 Rat: 8,690 mg/kg LD 50 Mouse: 6,580 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: 16000 ppm; 4 h
ISOPROPANOL	no data available
DIACETONE ALCOHOL	no data available
PROPYL ACETATE, NORMAL	LC 50 Rat: 8000 ppm; 4 h
PROPANOL, NORMAL	LC 50 Rat: 4000 ppm; 4 h
ETHYLENE GLYCOL MONOBUTYL ETHER	LC 50 Guinea pig: > 633 ppm; 1 h
XYLENE	LC 50 Rat: 6700 ppm; 4 h
1-METHOXY-2-PROPANOL	LC 50 Rat: > 10000 ppm; 4 h
DIPROPYLENE GLYCOL MONOMETHYL ETHER	no data available
ETHYL ACETATE	LC 50 Rat: 16,000 mg/l; 6 h
ETHYL BENZENE	LC Lo Rat: 4000 ppm; 4 h
METHANOL	LC 50 Rat: 64000 ppm; 4 h
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LC 50 Rat: 3400 ppm; 4 h
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LC 50 Rat: > 5344 ppm; 4 h
DIETHYLENE GLYCOL MONOETHYL ETHER	no data available

Acute dermal toxicity

TOLUENE	LD 50 Rabbit: 12,124 mg/kg
ISOPROPANOL	no data available
DIACETONE ALCOHOL	LD 50 Rabbit: 13,500 mg/kg
PROPYL ACETATE, NORMAL	no data available
PROPANOL, NORMAL	LD 50 Rabbit: 5,040 mg/kg
ETHYLENE GLYCOL MONOBUTYL ETHER	LD 50 Rabbit: 400 - 500 mg/kg LD 50 Guinea pig: > 2,000 mg/kg
XYLENE	LD 50 Rabbit: > 2,000 mg/kg
1-METHOXY-2-PROPANOL	LD 50 Rabbit: 13,000 mg/kg
DIPROPYLENE GLYCOL MONOMETHYL ETHER	LD 50 Rabbit: 9.5 g/kg
ETHYL ACETATE	no data available
ETHYL BENZENE	LD 50 Rabbit: 17,800 mg/kg
METHANOL	LD 50 Rabbit: 12,800 mg/kg
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	LD 50 Rat: > 4,000 mg/kg
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	LD 50 Rabbit: (>) 5,000 mg/kg
DIETHYLENE GLYCOL MONOETHYL ETHER	LD 50 Rabbit: 4,150 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

TOLUENE	no data available
ISOPROPANOL	no data available
DIACETONE ALCOHOL	no data available
PROPYL ACETATE, NORMAL	no data available
PROPANOL, NORMAL	no data available
ETHYLENE GLYCOL MONOBUTYL ETHER	no data available
XYLENE	no data available

1-METHOXY-2-PROPANOL
DIPROPYLENE GLYCOL MONOMETHYL ETHER

no data available
75%
Exposure time: 28 d
Method: OECD Test Guideline 301D
no data available
no data available
99%
Exposure time: 28 d
Method: OECD Test Guideline 301D

ETHYL ACETATE
ETHYL BENZENE
METHANOL

SOLVENT NAPHTHA (PETROLEUM), LIGHT
ALIPHATIC
PROPYLENE GLYCOL MONOMETHYL ETHER
ACETATE
DIETHYLENE GLYCOL MONOETHYL ETHER

no data available

no data available
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

ISOPROPANOL
DIACETONE ALCOHOL
PROPYL ACETATE, NORMAL
PROPANOL, NORMAL
ETHYLENE GLYCOL MONOBUTYL ETHER
XYLENE
1-METHOXY-2-PROPANOL
DIPROPYLENE GLYCOL MONOMETHYL ETHER
ETHYL ACETATE

no data available
no data available
no data available
no data available
no data available
no data available
no data available
no data available
Species: Green algae (*Chlorella fusca vacuolata*)
Exposure time: 24 h
Dose: 0.05 mg/l
Bioconcentration factor (BCF): 13,500

ETHYL BENZENE
METHANOL

Method: Static
no data available
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
PROPYLENE GLYCOL MONOMETHYL ETHER
ACETATE
DIETHYLENE GLYCOL MONOETHYL ETHER

no data available

no data available
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
96 h LC 50 Fathead minnow (*Pimephales promelas*): 5,770.00 - 7,450.00 mg/l Method:
no data available
no data available
no data available
no data available
96 h static test LC 50 Fathead minnow (*Pimephales promelas*): 23.53 - 29.97 mg/l
no data available
96 h LC 50 *Pimephales promelas* (fathead minnow): > 10,000.00 mg/l
96 h flow-through test LC 50 Fathead minnow (*Pimephales promelas*): 220.00 - 250.00 mg/l
96 h static test LC 50 Fathead minnow (*Pimephales promelas*): 9.10 - 15.60 mg/l
96 h Renewal LC 50 Rainbow trout,donaldson trout (*Oncorhynchus mykiss*): 4.20 mg/l ; Mortality

ISOPROPANOL
DIACETONE ALCOHOL
PROPYL ACETATE, NORMAL
PROPANOL, NORMAL
ETHYLENE GLYCOL MONOBUTYL ETHER
XYLENE
1-METHOXY-2-PROPANOL
DIPROPYLENE GLYCOL MONOMETHYL ETHER
ETHYL ACETATE
ETHYL BENZENE

trout (*Oncorhynchus mykiss*): 18,000.00 -
20,000.00 mg/l

METHANOL
SOLVENT NAPHTHA (PETROLEUM), LIGHT
ALIPHATIC
PROPYLENE GLYCOL MONOMETHYL ETHER
ACETATE
DIETHYLENE GLYCOL MONOETHYL ETHER

no data available

no data available

no data available

Toxicity to daphnia and other aquatic invertebrates:

TOLUENE 48 h static test EC 50 Water flea (*Daphnia magna*): 6.00 mg/l
ISOPROPANOL 24 h static test LC 50 Water flea (*Daphnia magna*): > 10,000.00 mg/l Method: Static Mortality
DIACETONE ALCOHOL no data available
PROPYL ACETATE, NORMAL no data available
PROPANOL, NORMAL no data available
ETHYLENE GLYCOL MONOBUTYL ETHER no data available
XYLENE 24 h static test LC 50 Water flea (*Daphnia magna*): > 100.00 - < 1,000.00 mg/l
1-METHOXY-2-PROPANOL no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER 48 h LC 50 Water flea (*Daphnia magna*): 1,919.00 mg/l
ETHYL ACETATE 48 h static test LC 50 Water flea (*Daphnia cucullata*): 154.00 mg/l
ETHYL BENZENE 48 h static test EC 50 Water flea (*Daphnia magna*): 1.37 - 4.40 mg/l Intoxication
METHANOL 48 h static test EC 50 Water flea (*Daphnia magna*): > 10,000.00 mg/l
SOLVENT NAPHTHA (PETROLEUM), LIGHT
ALIPHATIC no data available
PROPYLENE GLYCOL MONOMETHYL ETHER
ACETATE no data available
DIETHYLENE GLYCOL MONOETHYL ETHER no data available

Toxicity to algae

TOLUENE no data available
ISOPROPANOL no data available
DIACETONE ALCOHOL no data available
PROPYL ACETATE, NORMAL no data available
PROPANOL, NORMAL no data available
ETHYLENE GLYCOL MONOBUTYL ETHER no data available
XYLENE no data available
1-METHOXY-2-PROPANOL no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER 96 h Growth inhibition Green algae (*Selenastrum capricornutum*): > 969.00 mg/l
ETHYL ACETATE no data available
ETHYL BENZENE 96 h Growth inhibition *Pseudokirchneriella subcapitata* (green algae): 3.60 mg/l
METHANOL no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT
ALIPHATIC no data available
PROPYLENE GLYCOL MONOMETHYL ETHER
ACETATE no data available
DIETHYLENE GLYCOL MONOETHYL ETHER no data available

Toxicity to Bacteria

TOLUENE no data available
ISOPROPANOL no data available
DIACETONE ALCOHOL no data available
PROPYL ACETATE, NORMAL no data available
PROPANOL, NORMAL no data available
ETHYLENE GLYCOL MONOBUTYL ETHER no data available
XYLENE no data available
1-METHOXY-2-PROPANOL no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER no data available
ETHYL ACETATE no data available
ETHYL BENZENE no data available
METHANOL no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT
ALIPHATIC no data available

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	no data available
DIETHYLENE GLYCOL MONOETHYL ETHER	no data available
Biochemical Oxygen Demand (BOD)	
TOLUENE	no data available
ISOPROPANOL	no data available
DIACETONE ALCOHOL	no data available
PROPYL ACETATE, NORMAL	no data available
PROPANOL, NORMAL	no data available
ETHYLENE GLYCOL MONOBUTYL ETHER	no data available
XYLENE	no data available
1-METHOXY-2-PROPANOL	no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER	no data available
ETHYL ACETATE	no data available
ETHYL BENZENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	no data available
DIETHYLENE GLYCOL MONOETHYL ETHER	no data available
Chemical Oxygen Demand (COD)	
TOLUENE	no data available
ISOPROPANOL	no data available
DIACETONE ALCOHOL	no data available
PROPYL ACETATE, NORMAL	no data available
PROPANOL, NORMAL	no data available
ETHYLENE GLYCOL MONOBUTYL ETHER	no data available
XYLENE	no data available
1-METHOXY-2-PROPANOL	no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER	2.02 mg/g
ETHYL ACETATE	no data available
ETHYL BENZENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	no data available
DIETHYLENE GLYCOL MONOETHYL ETHER	no data available
Additional ecological information	
TOLUENE	no data available
ISOPROPANOL	no data available
DIACETONE ALCOHOL	no data available
PROPYL ACETATE, NORMAL	no data available
PROPANOL, NORMAL	no data available
ETHYLENE GLYCOL MONOBUTYL ETHER	no data available
XYLENE	no data available
1-METHOXY-2-PROPANOL	no data available
DIPROPYLENE GLYCOL MONOMETHYL ETHER	no data available
ETHYL ACETATE	no data available
ETHYL BENZENE	no data available
METHANOL	no data available
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	no data available
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	no data available
DIETHYLENE GLYCOL MONOETHYL ETHER	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
-------------	----------------------	---	---------------	---	--------------------	---	---------------	---	---------------------------------	---------

U.S. DOT - ROAD

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

U.S. DOT - RAIL

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

U.S. DOT - INLAND WATERWAYS

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

TRANSPORT CANADA - ROAD

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

TRANSPORT CANADA - RAIL

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

TRANSPORT CANADA - INLAND WATERWAYS

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

INTERNATIONAL MARITIME DANGEROUS GOODS

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

U.N.	1993	Flammable liquids, n.o.s. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

U.N.	1993	Liquido Inflamable, n.o.s. N.E.P. (Toluene, Isopropanol)	3				II
------	------	---	---	--	--	--	----

*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 CUMENE 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
Health Hazard
Health Hazard

SARA 313 Component(s)

TOLUENE	42.40%
ETHYLENE GLYCOL MONOBUTYL ETHER	5.94%
DIETHYLENE GLYCOL MONOETHYL ETHER	1.20%
XYLENE	4.29%

ETHYL BENZENE1.30%

METHANOL1.20%

New Jersey RTK Label Information

DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0
METHANOL	67-56-1
ETHYL BENZENE	100-41-4
ETHYL ACETATE	141-78-6
1-METHOXY-2-PROPANOL	107-98-2
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8
XYLENE	1330-20-7
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
PROPANOL, NORMAL	71-23-8
PROPYL ACETATE, NORMAL	109-60-4
DIACETONE ALCOHOL	123-42-2
ISOPROPANOL	67-63-0
TOLUENE	108-88-3

Pennsylvania RTK Label Information

BENZENE	71-43-2
DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0
METHANOL	67-56-1
ETHYL BENZENE	100-41-4
ETHYL ACETATE	141-78-6
1-METHOXY-2-PROPANOL	107-98-2
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8
XYLENE	1330-20-7
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
PROPANOL, NORMAL	71-23-8
PROPYL ACETATE, NORMAL	109-60-4
DIACETONE ALCOHOL	123-42-2
ISOPROPANOL	67-63-0
TOLUENE	108-88-3

Notification status

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)	2327 lbs
--	----------

Reportable quantity-Components

XYLENE	1330-20-7	100 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).