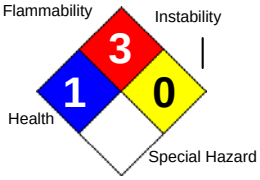
SAFETY DATA SHEET
Klean Strip Green Denatured Alcohol

HEALTH	* 1
FLAMMABILITY	3
PHYSICAL	0
PPE	



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Supersedes Revision: 11/13/2008

1. Product and Company Identification

Product Code: 1623

Product Name: Klean Strip Green Denatured Alcohol

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Department (901)775-0100

Synonyms

QKGA75003

2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Flammable Liquids, Category 1	Flame	Danger	Extremely flammable liquid and vapor
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Target Organ Systemic Toxicity (single exposure), Category 1	Health hazard	Danger	Causes damage to organs liver, kidney, CNS.
Aspiration Toxicity, Category 1	Health hazard	Danger	May be fatal if swallowed and enters airways.
Aquatic Toxicity (Acute), Category 3	none		Harmful to aquatic life
Aquatic Toxicity (Chronic), Category 3	none		Harmful to aquatic life with long lasting effects

GHS Hazard Phrases

H224: Extremely flammable liquid and vapor.
H319: Causes serious eye irritation.
H370: Causes damage to organs liver, kidney, CNS.
H304: May be fatal if swallowed and enters airways.
H402: Harmful to aquatic life.
H412: Harmful to aquatic life with long lasting effects.

GHS Precaution Phrases

P233: Keep container tightly closed.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P243: Take precautionary measures against static discharge.
P242: Use only non-sparking tools.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P260: Do not breathe gas/mist/vapours/spray.
P273: Avoid release to the environment.

GHS Response Phrases

P370+378: In case of fire, use dry chemical or CO2 to extinguish.

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

P307+311: IF exposed: Call a POISON CENTER or doctor/physician.

P322: Specific measures {see ... on this label}.

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331: Do NOT induce vomiting.

GHS Storage and Disposal Phrases

P403+235: Store in cool/well-ventilated place.

P501: Dispose of contents/container in accordance with all applicable regulations.

P405: Store locked up.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted vision, dilation of pupils, and convulsions.

Skin Contact Acute Exposure Effects:

May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

Eye Contact Acute Exposure Effects:

May cause irritation.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation. Prolonged ingestion may cause liver damage, "fetal-alcohol syndrome" in pregnant females and neuronal degeneration. Aspiration into lungs while vomiting, may result in severe pulmonary injury.

Chronic Exposure Effects:

May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, pancreatic damage, and death.

Medical Conditions Generally Aggravated By Exposure

Diseases of the liver.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration
1. Ethyl alcohol {Ethanol}	64-17-5	85.0 -90.0 %
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	<=5.0 %
3. Methyl isobutyl ketone {Hexone; Isopropylacetone; MIBK; 4-Methyl-2-pentanone}	108-10-1	< 3.0 %

Hazardous Components (Chemical Name)	CAS #	Concentration
4. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	< 2.0 %
5. Heptane	142-82-5	< 2.0 %

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:
Wash with soap and water while removing contaminated clothing. If symptoms persist seek medical advice.

Eye Contact:
Flush with large quantities of water for at least 15 minutes. Get medical attention.

Ingestion:
Call your poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.
Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may 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 as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further instructions.

Signs and Symptoms Of Exposure

Unconsciousness. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Proteinuria. Birth defects. Sterility.

5. Fire Fighting Measures

Flammability Classification: OSHA Class IB

Flash Pt: 55.00 F Method Used: Unknown

Explosive Limits: LEL: 3.3 % UEL: 19%

Autoignition Pt: 685.00 F

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined area. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Flashback of vapors possible over considerable distance.

Hazardous Combustion Products

Fire may produce irritating, corrosive and/or toxic gases.

Suitable Extinguishing Media

Use carbon dioxide, dry powder, alcohol-resistant foam, or water spray.

Unsuitable Extinguishing Media

Do not use water jet as an extinguisher

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean-up:
Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources, keep flares, smoking or flames out of hazard area.

Small spills:
Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:
Dike far ahead of spill for later disposal.

Do not flush into surface water or sanitary sewer system.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Ethyl alcohol {Ethanol}	64-17-5	PEL: 1000 ppm	TLV: 1000 ppm	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
3. Methyl isobutyl ketone {Hexone; Isopropylacetone; MIBK; 4-Methyl-2-pentanone}	108-10-1	PEL: 100 ppm	TLV: 50 ppm STEL: 75 ppm	No data.
4. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	PEL: 400 ppm	TLV: 400 ppm	No data.
5. Heptane	142-82-5	PEL: 500 ppm	TLV: 400 ppm	No data.

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing eyes and skin.
Do not eat, drink, or smoke in the work area.
Wash hands thoroughly after use.
Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.
Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Melting Point:	No data.
Boiling Point:	174.20 F
Autoignition Pt:	685.00 F
Flash Pt:	55.00 F Method Used: Unknown
Explosive Limits:	LEL: 3.3 % UEL: 19%
Specific Gravity (Water = 1):	0.789 - 0.83 at 60.0 F
Bulk density:	6.75 LB/GA
Vapor Pressure (vs. Air or mm Hg):	~ 44 MM HG at 20.0 C
Vapor Density (vs. Air = 1):	~ 1.6
Evaporation Rate:	~ 2 (BuAC=1)
Solubility in Water:	miscible

Solubility Notes

Completely soluble in water.

Percent Volatile:	100.0 % by weight.
VOC / Volume:	789.0000 G/L

Appearance and Odor

Clear, water white, thin liquid

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability

Heat, flames and sparks. Avoid temperatures exceeding the flash point.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, and possibly other unidentified organic compounds.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions

No data available.

11. Toxicological Information

Toxicological Information

CAS# 64-17-5:
Acute toxicity, LD50, Oral, Rat, 7060. MG/KG.
Result:
Lungs, Thorax, or Respiration:Other changes.
- Toxicology and Applied Pharmacology, Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 16,718, 1970

Acute toxicity, LC50, Inhalation, Rat, 20000. PPM, 10 H.
Result:
Effects on Newborn: Behavioral.
Effects on Newborn: Physical.
- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,44, 1974

Standard Draize Test, Skin, Species: Rabbit, 20.00 MG, 24 H, Moderate.
Result:
Effects on Newborn: Apgar score (human only).
Effects on Newborn: Other neonatal measures or effects.
Effects on Newborn: Drug dependency.
- Prehled Prumyslove Toxikologie, Marhold, J., Organicke Latky, Prague Czechoslovakia, Vol/p/yr: -,189, 1986

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, Severe.
Result:
Effects on Embryo or Fetus: Other effects to embryo.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 67-56-1:
Reproductive Effects:, TDLo, Oral, Rat, 42.00 mL/kg, 21 day after birth.
Result:
Effects on Newborn: Behavioral.
- Neurotoxicology and Teratology., Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, Vol/p/yr: 24,519, 2002

Mutagenicity:, Mutation test: DNA damage., Oral, Rat, 10.00 UMOL/KG.
Result:
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Tumorigenic:Tumors at site of application.
- Environmental Mutagenesis., For publisher information, see EMMUEG, New York, NY, Vol/p/yr: 4,317, 1982

Acute toxicity, LD50, Oral, Rat, 5628. MG/KG.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
- Gigiena Truda i Professional'nye Zabolevaniya.(Labor Hygiene and Occupational Disease), V/O Mezhdunarodnaya Kniga, Moscow 113095 Russia, Vol/p/yr: 19(11),27, 1975

Acute toxicity, LC50, Inhalation, Rat, 64000. PPM, 4 H.

Result:
Behavioral: Altered sleep time (including change in righting reflex).
Behavioral: Somnolence (general depressed activity).
Lungs, Thorax, or Respiration:Dyspnea.
- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,74, 1974

Standard Draize Test, Skin, Species: Rabbit, 20.00 MG, 24 H, Moderate.
Result:
Blood:Other changes.
Biochemical: Metabolism (Intermediary): Other proteins.
- Prehled Prumyslove Toxikologie, Marhold, J., Organicke Latky, Prague Czechoslovakia, Vol/p/yr: -,187, 1986

Standard Draize Test, Eyes, Species: Rabbit, 40.00 MG, Moderate.
Result:
Blood:Other hemolysis with or withot anemia.
Blood:Other changes.
Biochemical: Metabolism (Intermediary): Other proteins.
- Union Carbide Data Sheet, Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817, Vol/p/yr: 3/24, 1970

Standard Draize Test, Eyes, Species: Rabbit, 100.0 MG, 24 H, Moderate.
Result:
Blood:Changes in serum composition (e.g.
Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Phosphatases.
Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Transaminases.
- Prehled Prumyslove Toxikologie, Marhold, J., Organicke Latky, Prague Czechoslovakia, Vol/p/yr: -,187, 1986

CAS# 108-10-1:
Acute toxicity, LD50, Oral, Rat, 2080. MG/KG; Union Carbide Data Sheet, Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817, Vol/p/yr: 4/25, 1958

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H, Mild; Prehled Prumyslove Toxikologie, Marhold, J., Organicke Latky, Prague Czechoslovakia, Vol/p/yr: -,284, 1986

Standard Draize Test, Eyes, Species: Rabbit, 40.00 MG, Severe; Union Carbide Data Sheet, Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817, Vol/p/yr: 4/25, 1958

CAS# 141-78-6:
Acute toxicity, LD50, Oral, Rat, 5620. MG/KG.
Result:
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation.
Lungs, Thorax, or Respiration:Other changes.
- Yakkyoku. Pharmacy., Nanzando, Tokyo Japan, Vol/p/yr: 32,1241, 1981

Acute toxicity, LC50, Inhalation, Rat, 200.0 GM/M3.
Result:

Behavioral: Somnolence (general depressed activity).
Lungs, Thorax, or Respiration:Acute pulmonary edema.
Gastrointestinal: Changes in structure or function of salivary glands.
- Science Reports of the Research Institutes, Tohoku University, Series C: Medicine., Tohoku University, Research Institute for Tuberculosis and Cancer, 4-1 Seiryo-machi, Sendai Japan, Vol/p/yr: 36(1-4),10, 1989

Acute toxicity, LC50, Inhalation, Rat, 1600. ppm.
Result:
Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

Standard Draize Test, Eyes, Human, 400.0 PPM.
Result:
Liver: Hepatitis (hepatocellular necrosis), zonal.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Ethyl alcohol {Ethanol}	64-17-5	n.a.	1	A4	n.a.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
3. Methyl isobutyl ketone {Hexone; Isopropylacetone; MIBK; 4-Methyl-2-pentanone}	108-10-1	n.a.	2B	n.a.	n.a.
4. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	n.a.	n.a.	n.a.	n.a.
5. Heptane	142-82-5	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information

Do not flush into surface water or sanitary sewer system.
Low potential to affect aquatic organisms and secondary waste treatment organisms.
Readily biodegradable.
Not likely to bioconcentrate.

Results of PBT and vPvB assessment

CAS# 64-17-5:
LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 18000000. UG/L, 1 H, Mortality, Water temperature: 18.00 C - 22.00 C C.
Result:
Sex Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 13480000. UG/L, 48 H, Mortality, Water temperature: 18.00 C - 22.00 C C.
Result:
Age Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 13480000. UG/L, 72 H, Mortality, Water temperature: 18.00 C - 22.00 C C.
Result:
Age Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 13480000. UG/L, 96 H, Mortality, Water temperature: 18.00 C - 22.00 C C.
Result:
Sex Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 100000. UG/L, 96 H, Mortality, Water temperature: 20.00 C C, pH: 8.50.
Result:
Sex Effects.
- Simultaneous Evaluation of the Acute Effects of Chemicals on Seven Aquatic Species, Ewell, W.S., J.W. Gorsuch, R.O. Kringle, K.A. Robillard, and R.C. Spiegel, 1986

LC50, Water Flea (Daphnia magna), 9300000. UG/L, 48 H, Mortality.
Result:
Age Effects.
- Methodology for Assessing the Acute Toxicity of Chemicals Sorbed to Sediments: Testing the Equilibrium Partitioning Theory, Ziegenfuss, P.S., W.J. Renaudette, and W.J. Adams, 1986

LC50, Water Flea (Daphnia magna), larva(e), 100000. UG/L, 96 H, Mortality, Water temperature: 20.00 C C, pH: 8.50.
Result:
Age Effects.
- Simultaneous Evaluation of the Acute Effects of Chemicals on Seven Aquatic Species, Ewell, W.S., J.W. Gorsuch, R.O. Kringle, K.A. Robillard, and R.C. Spiegel, 1986

LC50, Water Flea (Daphnia magna), neonate, 11853000. UG/L, 48 H, Mortality, Water temperature: 20.00 C - 20.80 C C, pH: 8.30, Hardness: 159.60 MG/L.
Result:
Age Effects.
- Comparison of Ethanol Toxicity to Daphnia magna and Ceriodaphnia dubia Tested at Two Different Temperatures: Static Acute Toxicity Test Results, Takahashi, I.T., U.M. Cowgill, and P.G. Murphy, 1987

CAS# 67-56-1:
LC50, Fathead Minnow (Pimephales promelas), 28200000. UG/L, 96 H, Mortality, Water temperature: 25.00 C C, pH: 7.50, Hardness: 56.30 MG/L.
Result:
Sex Effects.
- Estimating the Acute Toxicity of Narcotic Industrial Chemicals to Fathead Minnows, Veith, G.D., D.J. Call, and L.T. Brooke, 1983

LC50, Fathead Minnow (Pimephales promelas), 28400000. UG/L, 72 H, Mortality.
Result:
Sex Effects.
- Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms, Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter, 1983

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 100000. UG/L, 96 H, Mortality, Water temperature: 20.00 C C, pH: 8.50.
Result:
Sex Effects.
- Simultaneous Evaluation of the Acute Effects of Chemicals on Seven Aquatic Species, Ewell, W.S., J.W. Gorsuch, R.O. Kringle, K.A. Robillard, and R.C. Spiegel, 1986

LC50, Fathead Minnow (Pimephales promelas), 28400. MG/L, 24 H, Mortality, Water temperature: 25.00 C C.
Result:
Sex Effects.
- Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms, Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter, 1983

LC50, Fathead Minnow (Pimephales promelas), 28400. MG/L, 48 H, Mortality, Water temperature: 25.00 C C.
Result:
Sex Effects.
- Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms, Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter, 1983

LC50, Fathead Minnow (Pimephales promelas), 28100. MG/L, 96 H, Mortality, Water temperature: 25.00 C C.
Result:
Sex Effects.
- Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms, Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter, 1983

LC50, Water Flea (Daphnia magna), larva(e), 100000. UG/L, 96 H, Mortality, Water temperature: 20.00 C C, pH: 8.50.
Result:
Sex Effects.
- Simultaneous Evaluation of the Acute Effects of Chemicals on Seven Aquatic Species, Ewell, W.S., J.W. Gorsuch, R.O. Kringle, K.A. Robillard, and R.C. Spiegel, 1986

LC50, Water Flea (Daphnia magna), neonate, 4816. MG/L, 24 H, Mortality, Water temperature: 20.00 C C.
Result:
Age Effects.
- Acute Toxicity Test with Daphnia magna: An Alternative to Mammals in the Prescreening of Chemical Toxicity?, Guilhermino, L., T. Diamantino, M.C. Silva, and A.M.V.M. Soares, 2000

LC50, Water Flea (Daphnia magna), neonate, 3289. MG/L, 48 H, Mortality, Water temperature: 20.00 C C.
Result:
Age Effects.
- Acute Toxicity Test with Daphnia magna: An Alternative to Mammals in the Prescreening of Chemical Toxicity?, Guilhermino, L., T. Diamantino, M.C. Silva, and A.M.V.M. Soares, 2000

CAS# 108-10-1:
LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 537000. UG/L, 96 H, Mortality, Water temperature: 25.00 C C, pH: 7.60, Hardness: 44.60 MG/L.
Result:
Age Effects.

- Acute Toxicity of Organic Chemical Mixtures to the Fathead Minnow, Broderius, S., and M. Kahl, 1985

CAS# 141-78-6:
LC50, Fathead Minnow (Pimephales promelas), 270000. UG/L, 48 H, Mortality, Water temperature: 20.00 C C.
Result:
Age Effects.
- Comparison of the Susceptibility of 22 Freshwater Species to 15 Chemical Compounds. I. (Sub)Acute Toxicity Tests, Slooff, W., J.H. Canton, and J.L.M. Hermens, 1983

LC50, Fathead Minnow (Pimephales promelas), 230000. UG/L, 96 H, Mortality, Water temperature: 24.30 C C, pH: 7.40, Hardness: 45.00 MG/L.
Result:
Age Effects.
- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1, Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott, 1984

LC50, Fathead Minnow (Pimephales promelas), 180000. - 320000. UG/L, 24 H, Mortality, Water temperature: 20.00 C C.
Result:
Age Effects.
- A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic Levels, Slooff, W., 1982

LC50, Fathead Minnow (Pimephales promelas), 270000. UG/L, 48 H, Mortality, Water temperature: 20.00 C C.
Result:
Age Effects.
- A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic Levels, Slooff, W., 1982

LC50, Water Flea (Daphnia magna), 560000. UG/L, 48 H, Mortality.
Result:
Age Effects.
- Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments, Canton, J.H., and D.M.M. Adema, 1978

LC50, Water Flea (Daphnia magna), 590.0 MG/L, Mortality.
Result:
Age Effects.
- Comparative Hydrobiological-Toxicological Results in Micro- and Macroorganisms of Biological Spectra (Vergleichende Hydrobiologisch-Toxikologische Befunde an Mikro- und Makroorganismen Biologischer Spektren), Kuhn, R., and J.H. Canton, 1979

LC50, Water Flea (Daphnia magna), 790.0 MG/L, 24 H, Intoxication,, Water temperature: 20.00 C - 22.00 C C, pH: 7.70, Hardness: 16.00 dH.
Result:
Age Effects.
- Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna), Bringmann, G., and R. Kuhn, 1977

LC50, Water Flea (Daphnia magna), 2500. MG/L, 24 H, Intoxication,, Water temperature: 20.00 C - 22.00 C C, pH: 7.70, Hardness: 16.00 dH.
Result:
Age Effects.
- Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna), Bringmann, G., and R. Kuhn, 1977

13. Disposal Considerations

Waste Disposal Method

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

RCRA Waste ID Code: D001

14. Transport Information

LAND TRANSPORT (US DOT)

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Same as land.

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name Same as land.

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Ethyl alcohol {Ethanol}	64-17-5	No	No	No	No
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
3. Methyl isobutyl ketone {Hexone; Isopropylacetone; MIBK; 4-Methyl-2-pentanone}	108-10-1	No	Yes 5000 LB	Yes	Yes
4. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	No	Yes 5000 LB	No	No
5. Heptane	142-82-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Ethyl alcohol {Ethanol}	64-17-5	No	No	Inventory	No
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP	No	Inventory	Yes
3. Methyl isobutyl ketone {Hexone; Isopropylacetone; MIBK; 4-Methyl-2-pentanone}	108-10-1	HAP	No	Inventory	Yes
4. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	No	No	Inventory, 4 Test	No
5. Heptane	142-82-5	No	No	Inventory, 4 Test, 8A PAIR	No

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[X] Yes [ ] No Acute (immediate) Health Hazard

[X] Yes [ ] No Chronic (delayed) Health Hazard

[X] Yes [ ] No Fire Hazard

[ ] Yes [X] No Sudden Release of Pressure Hazard

[ ] Yes [X] No Reactive Hazard

Regulatory Information Statement

All components of this material are listed on the TSCA Inventory or are exempt.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Revision Date: 07/11/2014