

Material Safety Data Sheet

Ethyl Alcohol, Denatured (A407)

ACC# 08701

Section 1 - Chemical Product and Company Identification

MSDS Name: Ethyl Alcohol, Denatured (A407)

Catalog Numbers: S73979, S73979-1, S73979-2, S73985, A407 20 001, A407 20 002, A407 20 003, A407 20 004, A407 20 005, A407 20 006, A407 20 007, A407 20 008, A407 20 009, A407 20 010, A407 500 001, A407-1, A407-20, A407-200, A407-4, A407-500, A40720 001, A40720 002, A40720 003, A40720 004, A40720 005, A40720 006, A40720 007, A40720 008, A40720 009, A40720 010, A40720001, A40720002, A40720003, A40720004, A40720005, A40720006, A40720007, A40720008, A40720009, A40720010, A407500 001, A407500001, A407J500, A407OLC, A407P 1GAL, A407P-1GAL, A407P-4, A407P1GAL, A407P4, A407RB115, A407S-4, A407SK-4, BW6100200, NC9754311, S739791, S739792

Synonyms: Ethanol denatured, grain alcohol denatured, ethyl hydroxide denatured, ethyl hydrate denatured, algarin denatured

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
64-17-5	Ethyl Alcohol	85.4-92.	200-578-6
67-56-1	Methyl alcohol	3.6	200-659-6
67-63-0	Isopropyl alcohol	25 ppm	200-661-7
67-64-1	Acetone	2 ppm	200-662-2
71-43-2	Benzene	trace	200-753-7
75-07-0	Acetaldehyde	10 ppm	200-836-8
108-10-1	Methyl isobutyl ketone	1.9	203-550-1
108-88-3	Toluene	0.80%	203-625-9
141-78-6	Ethyl acetate	1.3	205-500-4
7732-18-5	Water	5.0%	231-791-2
64742-89-8	Solvent naphtha (petroleum), light aliphatic	0.72-0.7	265-192-2
308082-09-9	Gasoline, aviation	1	unlisted

Hazard Symbols: F**Risk Phrases:** 11

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless. Flash Point: 13 deg C. **Danger!** Flammable liquid. Causes severe eye irritation. May cause blindness if swallowed. May be fatal if swallowed. May cause skin irritation. May cause central nervous system depression. May cause liver and kidney damage. May cause reproductive and fetal effects. May be absorbed through intact skin. May form explosive peroxides.

Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause painful sensitization to light. Vapors may cause eye irritation.

Skin: May cause skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May be absorbed through the skin.

Ingestion: May be fatal or cause blindness if swallowed. May cause systemic toxicity with acidosis. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. May cause effects similar to those described for ingestion. May cause drowsiness, unconsciousness, and central nervous system depression.

Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged or repeated skin contact may cause defatting and dermatitis. Prolonged or repeated exposure may cause adverse reproductive effects. May cause fetal effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid. Induce vomiting by giving one teaspoon of Syrup of Ipecac.

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-

resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethyl Alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m ³ TWA 3300 ppm IDLH (10 percent lower explosive limit)	1000 ppm TWA; 1900 mg/m ³ TWA
Methyl alcohol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA
Isopropyl alcohol	(400 ppm) TWA; (500ppm) STEL	400 ppm TWA; 980 mg/m ³ TWA 2000 ppm IDLH (10 percent lower explosive limit)	400 ppm TWA; 980 mg/m ³ TWA
Acetone	500 ppm TWA; 750 ppm STEL	250 ppm TWA; 590 mg/m ³ TWA 2500 ppm IDLH (10 percent lower explosive level)	1000 ppm TWA; 2400 mg/m ³ TWA
Benzene	0.5 ppm TWA; 2.5 ppm STEL; skin - potential for cutaneous absorption	0.1 ppm TWA; NIOSH Potential Occupational Carcinogen - see Appendix A Potential NIOSH carcinogen.	10 ppm TWA (apply only to exempt industry segments); C
Acetaldehyde	C 25 ppm		200 ppm TWA; 360

		NIOSH Potential Carcinogen - see Appendix A; see Appendix C (Aldehydes) for supplementary exposure limits Potential NIOSH carcinogen.	
Methyl isobutyl ketone	50 ppm TWA; 75 ppm STEL	50 ppm TWA; 205 mg/m ³ TWA 500 ppm IDLH	100 ppm TWA; 410 mg/m ³ TWA
Toluene	50 ppm TWA; skin - potential for cutaneous absorption	100 ppm TWA; 375 mg/m ³ TWA 500 ppm IDLH	200 ppm TWA; C 300 ppm; C 300 ppm
Ethyl acetate	400 ppm TWA	400 ppm TWA; 1400 mg/m ³ TWA 2000 ppm IDLH (10 percent lower explosive limit)	400 ppm TWA; 1400 mg/m ³ TWA
Water	none listed	none listed	none listed
Solvent naphtha (petroleum), light aliphatic	none listed	none listed	none listed
Gasoline, aviation	none listed	none listed	none listed

OSHA Vacated PELs: Ethyl Alcohol: 1000 ppm TWA; 1900 mg/m³ TWA Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA; 250 ppm STEL; 325 mg/m³ STEL Isopropyl alcohol: 400 ppm TWA; 980 mg/m³ TWA; 500 ppm STEL; 1225 mg/m³ STEL Acetone: 750 ppm TWA; 1800 mg/m³ TWA; 1000 ppm STEL; 2400 mg/m³ STEL (The acetone STEL does not apply to the cellulose Benzene: 10 ppm TWA (unless specified in 1910.1028); 50 ppm STEL (10 min) (unless specified in 1910.1028); C 25 ppm (unless specified in 1910.1028) Acetaldehyde: 100 ppm TWA; 180 mg/m³ TWA; 150 ppm STEL; 270 mg/m³ STEL Methyl isobutyl ketone: 50 ppm TWA; 205 mg/m³ TWA; 75 ppm STEL; 300 mg/m³ STEL Toluene: 100 ppm TWA; 375 mg/m³ TWA; 150 ppm STEL; 560 mg/m³ STEL Ethyl acetate: 400 ppm TWA; 1400 mg/m³ TWA Water: No OSHA Vacated PELs are listed for this chemical. Solvent naphtha (petroleum), light aliphatic: No OSHA Vacated PELs are listed for this chemical. Gasoline, aviation: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless

Odor: aromatic odor

pH: No data

Vapor Pressure: 25 mm Hg

Vapor Density: 1.6 (ethanol)

Evaporation Rate: 2.0

Viscosity: Not available.

Boiling Point: 173.3 deg F

Freezing/Melting Point:-90 deg C
Autoignition Temperature: 685 deg F (362.78 deg C)
Flash Point: 13 deg C (55.40 deg F)
Decomposition Temperature:Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 3; Reactivity: 0
Explosion Limits, Lower:3.3 (ethanol)
Upper: 19 (ethanol)
Solubility: Soluble in water.
Specific Gravity/Density:0.7905
Molecular Formula:Mixture.
Molecular Weight:Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable. This material may be sensitive to peroxide formation.

Conditions to Avoid: This material may be sensitive to peroxide formation., incompatible materials, ignition sources.

Incompatibilities with Other Materials: Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable., acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane).

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 64-17-5: KQ6300000

CAS# 67-56-1: PC1400000

CAS# 67-63-0: NT8050000

CAS# 67-64-1: AL3150000

CAS# 71-43-2: CY1400000

CAS# 75-07-0: AB1925000

CAS# 108-10-1: SA9275000

CAS# 108-88-3: XS5250000

CAS# 141-78-6: AH5425000

CAS# 7732-18-5: ZC0110000

CAS# 64742-89-8 unlisted.

CAS# 308082-09-9 unlisted.

LD50/LC50:

CAS# 64-17-5:

Draize test, rabbit, eye: 500 mg Severe;

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, mouse: LC50 = 39 gm/m³/4H;
Inhalation, rat: LC50 = 20000 ppm/10H;
Oral, mouse: LD50 = 3450 mg/kg;
Oral, rabbit: LD50 = 6300 mg/kg;
Oral, rat: LD50 = 7060 mg/kg;

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5628 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;

CAS# 67-63-0:

Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg Mild;
Inhalation, rat: LC50 = 16000 ppm/8H;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, rabbit: LD50 = 6410 mg/kg;
Oral, rat: LD50 = 5045 mg/kg;
Skin, rabbit: LD50 = 12800 mg/kg;

CAS# 67-64-1:

Dermal, guinea pig: LD50 = >9400 uL/kg;
Draize test, rabbit, eye: 20 mg Severe;
Draize test, rabbit, eye: 20 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, mouse: LC50 = 44 gm/m³/4H;
Inhalation, rat: LC50 = 50100 mg/m³/8H;
Oral, mouse: LD50 = 3 gm/kg;
Oral, rabbit: LD50 = 5340 mg/kg;
Oral, rat: LD50 = 5800 mg/kg;

CAS# 71-43-2:

Dermal, guinea pig: LD50 = >9400 uL/kg;
Draize test, rabbit, eye: 88 mg Moderate;
Draize test, rabbit, eye: 2 mg/24H Severe;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, mouse: LC50 = 9980 ppm;
Inhalation, rat: LC50 = 10000 ppm/7H;
Oral, mouse: LD50 = 4700 mg/kg;
Oral, rat: LD50 = 930 mg/kg;
Skin, rabbit: LD50 = >9400 uL/kg;

CAS# 75-07-0:

Draize test, rabbit, eye: 40 mg Severe;
Inhalation, mouse: LC50 = 23 gm/m³/4H;
Inhalation, rat: LC50 = 13300 ppm/4H;
Oral, mouse: LD50 = 900 mg/kg;
Oral, rat: LD50 = 661 mg/kg;
Skin, rabbit: LD50 = 3540 mg/kg;

CAS# 108-10-1:

Draize test, rabbit, eye: 40 mg Severe;
Draize test, rabbit, eye: 100 uL/24H Moderate;
Draize test, rabbit, skin: 500 mg/24H Mild;

Inhalation, mouse: LC50 = 23300 mg/m³;
 Inhalation, rat: LC50 = 100 gm/m³;
 Oral, mouse: LD50 = 1900 mg/kg;
 Oral, rat: LD50 = 2080 mg/kg;
 CAS# 108-88-3:
 Draize test, rabbit, eye: 870 ug Mild;
 Draize test, rabbit, eye: 2 mg/24H Severe;
 Draize test, rabbit, skin: 435 mg Mild;
 Draize test, rabbit, skin: 500 mg Moderate;
 Draize test, rabbit, skin: 20 mg/24H Moderate;
 Inhalation, mouse: LC50 = 400 ppm/24H;
 Inhalation, rat: LC50 = 49 gm/m³/4H;
 Oral, rat: LD50 = 636 mg/kg;
 Skin, rabbit: LD50 = 14100 uL/kg;
 CAS# 141-78-6:
 Inhalation, mouse: LC50 = 45 gm/m³/2H;
 Inhalation, rat: LC50 = 200 gm/m³;
 Oral, mouse: LD50 = 4100 mg/kg;
 Oral, rabbit: LD50 = 4935 mg/kg;
 Oral, rat: LD50 = 5620 mg/kg;
 Skin, rabbit: LD50 = >20 mL/kg;
 CAS# 7732-18-5:
 Oral, rat: LD50 = >90 mL/kg;
 CAS# 64742-89-8:
 CAS# 308082-09-9:

Carcinogenicity:

CAS# 64-17-5:

ACGIH: A4 - Not Classifiable as a Human Carcinogen CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 67-63-0:

IARC: Group 3 carcinogen CAS# 67-64-1:

ACGIH: A4 - Not Classifiable as a Human Carcinogen CAS# 71-43-2:

ACGIH: A1 - Confirmed Human Carcinogen

California: carcinogen; initial date 2/27/87

NIOSH: occupational carcinogen

NTP: Known carcinogen

OSHA: Select carcinogen

IARC: Group 1 carcinogen CAS# 75-07-0:

ACGIH: A3 - Animal Carcinogen

California: carcinogen; initial date 4/1/88

NIOSH: occupational carcinogen

NTP: Suspect carcinogen

OSHA: Possible Select carcinogen

IARC: Group 2B carcinogen CAS# 108-10-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 108-88-3:

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 3 carcinogen CAS# 141-78-6: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 64742-89-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 308082-09-9: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have been collectively termed the fetal alcohol syndrome. Among the characteristics of this syndrome are intrauterine and postnatal growth deficiency, a distinctive pattern of physical malformation, and behavioral/cognitive impairment such as fine motor dysfunction and mental retardation. Not all affected children have all of the features of the

syndrome. This syndrome has been associated with alcoholic women who drank heavily and chronically during pregnancy

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3? C Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) ria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test 250 ppm/6hr/goldfish/lethal/fresh water

Environmental: Ethanol: In water, will volatilize and probably degrade.

Physical: No information available.

Other: Not expected to bioconcentrate in fish.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: CAS# 67-56-1: waste number U154; (Ignitable waste). CAS# 67-64-1: waste number U002; (Ignitable waste). CAS# 71-43-2: waste number U019; (Ignitable waste, Toxic waste). CAS# 75-07-0:

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	ETHANOL				ALCOHOLS TOXIC NOS (ETHANOL,METHANOL MIXTURE)
Hazard Class:	3				3(6.1)
UN Number:	UN1170				UN1986
Packing Group:	II				II
Additional Info:					FP 18C

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 64-17-5 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

CAS# 67-63-0 is listed on the TSCA inventory.

CAS# 67-64-1 is listed on the TSCA inventory.
 CAS# 71-43-2 is listed on the TSCA inventory.
 CAS# 75-07-0 is listed on the TSCA inventory.
 CAS# 108-10-1 is listed on the TSCA inventory.
 CAS# 108-88-3 is listed on the TSCA inventory.
 CAS# 141-78-6 is listed on the TSCA inventory.
 CAS# 7732-18-5 is listed on the TSCA inventory.
 CAS# 64742-89-8 is listed on the TSCA inventory.
 CAS# 308082-09-9 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List

CAS# 67-63-0: Effective Date: December 15, 1986; Sunset Date: December 15, 1996 CAS# 108-10-1: Effective Date: October 4, 1982; Sunset Date: October 4, 1992 CAS# 108-88-3: Effective Date: October 4, 1982; Sunset Date: October 4, 1992

Chemical Test Rules

CAS# 67-63-0: Testing required by: manufacturers; importers; processors (40

Section 12b

CAS# 67-63-0: 4/12b CAS# 67-64-1: 4/12b CAS# 108-10-1: 4/12b CAS# 141-78-6: 4/12b

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg) CAS# 67-64-1: final RQ = 5000 pounds (2270 kg) CAS# 71-43-2: final RQ = 10 pounds (4.54 kg); receives an adjustable RQ of 10 pounds base CAS# 75-07-0: final RQ = 1000 pounds (454 kg) CAS# 108-10-1: final RQ = 5000 pounds (2270 kg) CAS# 108-88-3: final RQ = 1000 pounds (454 kg) CAS# 141-78-6: final RQ = 5000 pounds (2270 kg)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 64-17-5: acute, chronic, flammable. CAS # 67-56-1: acute, flammable. CAS # 67-63-0: acute, chronic, flammable. CAS # 67-64-1: acute, chronic, flammable, sudden release of pressure. CAS # 71-43-2: acute, chronic, flammable. CAS # 75-07-0: acute, chronic, flammable, reactive. CAS # 108-10-1: acute, chronic, flammable, reactive. CAS # 108-88-3: acute, flammable. CAS # 141-78-6: flammable.

Section 313

This material contains Methyl alcohol (CAS# 67-56-1, 3.6%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This material contains Isopropyl alcohol (CAS# 67-63-0, 25%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This chemical is not at a high enough concentration to be reportable under Section 313. This material contains Acetaldehyde (CAS# 75-07-0, 10%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This material contains Methyl isobutyl ketone (CAS# 108-10-1, 1.9%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This chemical is not at a high enough concentration to be reportable under Section 313.

Clean Air Act:

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). CAS# 71-43-2 is listed as a hazardous air pollutant (HAP). CAS# 75-07-0 is listed as a hazardous air pollutant (HAP). CAS# 108-10-1 is listed as a hazardous air pollutant (HAP). CAS# 108-88-3 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 71-43-2 is listed as a Hazardous Substance under the CWA. CAS# 75-07-0 is listed as a Hazardous Substance under the CWA. CAS# 108-88-3 is listed as a Hazardous Substance under

the CWA. CAS# 71-43-2 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act. CAS# 71-43-2 is listed as a Toxic Pollutant under the Clean Water Act. CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

CAS# 75-07-0 is considered highly hazardous by OSHA.

STATE

CAS# 64-17-5 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-63-0 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-64-1 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 71-43-2 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 75-07-0 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 108-10-1 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 108-88-3 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 141-78-6 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 64742-89-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 308082-09-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

WARNING: This product contains Benzene, a chemical known to the state of California to cause cancer. WARNING: This product contains Benzene, a chemical known to the state of California to cause birth defects or other reproductive harm. WARNING: This product contains Acetaldehyde, a chemical known to the state of California to cause cancer. WARNING: This product contains Ethyl Alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: CAS# 71-43-2: no significant risk level = 7 ug/day CAS# 75-07-0: no significant risk level = 90 ug/day (inhalation) CAS# 108-88-3: NOEL = 7000 ug/day

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 2 Keep out of reach of children.

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 67-63-0: 1

CAS# 67-64-1: 0

CAS# 71-43-2: 3

CAS# 75-07-0: 1

CAS# 108-10-1: 1

CAS# 108-88-3: 2
 CAS# 141-78-6: 1
 CAS# 7732-18-5: No information available.
 CAS# 64742-89-8: No information available.
 CAS# 308082-09-9: No information available.

Canada

CAS# 64-17-5 is listed on Canada's DSL List. CAS# 64-17-5 is listed on Canada's DSL List.
 CAS# 67-56-1 is listed on Canada's DSL List. CAS# 67-56-1 is listed on Canada's DSL List.
 CAS# 67-63-0 is listed on Canada's DSL List. CAS# 67-63-0 is listed on Canada's DSL List.
 CAS# 67-64-1 is listed on Canada's DSL List. CAS# 67-64-1 is listed on Canada's DSL List.
 CAS# 71-43-2 is listed on Canada's DSL List. CAS# 71-43-2 is listed on Canada's DSL List.
 CAS# 75-07-0 is listed on Canada's DSL List. CAS# 75-07-0 is listed on Canada's DSL List.
 CAS# 108-10-1 is listed on Canada's DSL List. CAS# 108-10-1 is listed on Canada's DSL List.
 CAS# 108-88-3 is listed on Canada's DSL List. CAS# 108-88-3 is listed on Canada's DSL List.
 CAS# 141-78-6 is listed on Canada's DSL List. CAS# 141-78-6 is listed on Canada's DSL List.
 CAS# 7732-18-5 is listed on Canada's DSL List. CAS# 7732-18-5 is listed on Canada's DSL List.
 CAS# 64742-89-8 is listed on Canada's DSL List. CAS# 64742-89-8 is listed on Canada's DSL List.
 CAS# 64742-89-8 is listed on Canada's DSL List.

This product has a WHMIS classification of B2, D1A, D2B.

CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.
 CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.
 CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.
 CAS# 67-64-1 is listed on Canada's Ingredient Disclosure List.
 CAS# 71-43-2 is listed on Canada's Ingredient Disclosure List.
 CAS# 75-07-0 is listed on Canada's Ingredient Disclosure List.
 CAS# 108-10-1 is listed on Canada's Ingredient Disclosure List.
 CAS# 108-88-3 is listed on Canada's Ingredient Disclosure List.
 CAS# 141-78-6 is listed on Canada's Ingredient Disclosure List.
 CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
 CAS# 64742-89-8 is not listed on Canada's Ingredient Disclosure List.
 CAS# 308082-09-9 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 64-17-5: OEL-AUSTRALIA:TWA 1000 ppm (1900 mg/m3) OEL-BELGIUM:TWA 1000 ppm (1880 mg/m3) OEL-CZECHOSLOVAKIA:TWA 1000 mg/m3;STEL 5000 mg/m3 OEL-DENMARK:TWA 1000 ppm (1900 mg/m3) OEL-FINLAND:TWA 1000 ppm (1900 mg/m3);STEL 1250 ppm (2400 mg/m3) OEL-FRANCE:TWA 1000 ppm (1900 mg/m3);STEL 5000 pp OEL-GERMANY:TWA 1000 ppm (1900 mg/m3) OEL-HUNGARY:TWA 1000 mg/m3;STEL 3000 mg/m3 OEL-THE NETHERLANDS:TWA 1000 ppm (1900 mg/m3) OEL-THE PHILIPPINES:TWA 1000 ppm (1900 mg/m3) OEL-POLAND:TWA 1000 mg/m3 OEL-RUSSIA:STEL 1000 mg/m3 OEL-SWEDEN:TWA 1000 ppm (1900 mg/m3) OEL-SWITZERLAND:TWA 1000 ppm (1900 mg/m3) OEL-THAILAND:TWA 1000 ppm (1900 mg/m3) OEL-TURKEY:TWA 1000 ppm (1900 mg/m3) OEL-UNITED KINGDOM:TWA 1000 ppm (1900 mg/m3) JAN9 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m³);Skin OEL-AUSTRALIA:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin OEL-BELGIUM:TWA 200 ppm (262 mg/m³);STEL 250 ppm;Skin OEL-CZECHOSLOVAKIA:TWA 100 mg/m³;STEL 500 mg/m³ OEL-DENMARK:TWA 200 ppm (260 mg/m³);Skin OEL-FINLAND:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin OEL-FRANCE:TWA 200 ppm (260 mg/m³);STEL 1000 ppm (1300 mg/m³) OEL-GERMANY:TWA 200 ppm (260 mg/m³);Skin OEL-HUNGARY:TWA 50 mg/m³;STEL 100 mg/m³;Skin JAN9 OEL -JAPAN:TWA 200 ppm (260 mg/m³);Skin OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m³);Skin OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m³) OEL-POLAND:TWA 100 mg/m³ OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m³;Skin OEL-SWEDEN :TWA 200 ppm (250 mg/m³);STEL 250 ppm (350 mg/m³);Skin OEL-SWITZERLAND:TWA 200 ppm (260 mg/m³);STEL 400 ppm;Skin OEL-THAILAND:TWA 200 ppm (260 mg/m³) OEL-TURKEY:TWA 200 ppm (260 mg/m³) OEL-UNITED KINGDOM:TWA 200 ppm (260 mg/m³);STEL 250 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 67-63-0: OEL-AUSTRALIA:TWA 400 ppm (980 mg/m³);STEL 500 ppm (1225 mg/m³) OEL-BELGIUM:TWA 400 ppm (985 mg/m³);STEL 500 ppm (1230 mg/m³) OEL-DENMARK:TWA 200 ppm (490 mg/m³);Skin OEL-FRANCE:STEL 400 ppm (980 mg/m³) OEL-GERMANY:TWA 400 ppm (980 mg/m³) OEL-JAPAN:STEL 400 ppm (980 mg/m³) OEL-THE NETHERLANDS:TWA 400 ppm (980 mg/m³);Skin OEL-THE PHILIPPINES:TWA 400 ppm (980 mg/m³) OEL-RUSSIA:STEL 400 ppm (10 mg/m³) OEL-SWEDEN:TWA 150 ppm (350 mg/m³);STEL 250 ppm (600 mg/m³) OEL-SWITZERLAND:TWA 400 ppm (980 mg/m³);STEL 800 ppm OEL-TURKEY:TWA 200 ppm (500 mg/m³) OEL-UNITED KINGDOM:TWA 400 ppm (980 mg/m³);STEL 500 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 67-64-1: OEL-AUSTRALIA:TWA 500 ppm (1185 mg/m³);STEL 1000 ppm OEL-AUSTRIA:TWA 750 ppm (1780 mg/m³) OEL-BELGIUM:TWA 750 ppm (1780 mg/m³);STEL 1000 ppm OEL-CZECHOSLOVAKIA:TWA 800 mg/m³;STEL 4000 mg/m³ OEL-DENMARK:TWA 250 ppm (600 mg/m³) OEL-FINLAND:TWA 500 ppm (1200 mg/m³);STEL 625 ppm (1500 mg/m³) OEL-FRANCE:TWA 750 ppm (1800 mg/m³) OEL -GERMANY:TWA 1000 ppm (2400 mg/m³) OEL-HUNGARY:TWA 600 mg/m³;STEL 1200 mg/m³ OEL-INDIA:TWA 750 ppm (1780 mg/m³);STEL 1000 ppm (2375 mg/m³) OEL-JAPAN:TWA 200 ppm (470 mg/m³) OEL-THE NETHERLANDS:TWA 750 ppm (1780 mg/m³) JAN9 OEL-THE PHILIPPINES:TWA 1000 ppm (2400 mg/m³) OEL-POLAND:TWA 200 mg/m³ OEL-RUSSIA:TWA 200 ppm;STEL 200 mg/m³ OEL-SWEDEN :TWA 250 ppm (600 mg/m³);STEL 500 ppm (1200 mg/m³) OEL-SWITZERLAND:TWA 750 ppm (1780 mg/m³) OEL-TURKEY:TWA 1000 ppm (2400 mg/m³) OEL-UNITED KINGDOM:TWA 750 ppm (1810 mg/m³);STEL 1250 ppm OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 71-43-2: OEL-AUSTRALIA:TWA 5 ppm (16 mg/m³);Carcinogen OEL-BELGIUM:TWA 10 ppm (32 mg/m³);Carcinogen JAN9 OEL-CZECHOSLOVAKIA:TWA 10 mg/m³;STEL 20 mg/m³ OEL-DENMARK:TWA 5 ppm (16 mg/m³);Skin;Carcinogen OEL-FINLAND:TWA 5 ppm (15 mg/m³);STEL 10 ppm (30 mg/m³);Skin;CAR OEL -FRANCE:TWA 5 ppm (16 mg/m³);Carcinogen OEL-GERMANY;Skin;Carcinogen OEL-HUNGARY:STEL 5 mg/m³;Skin;Carcinogen OEL-INDIA:TWA 10 ppm (30 mg/m³);Carcinogen OEL-JAPAN:TWA 10 ppm (32 mg/m³);STEL 25 ppm (80 mg/m³) ;CAR OEL-THE NETHERLANDS:TWA 10 ppm (30 mg/m³);Skin OEL-THE PHILIPPINES:TWA 25 ppm (80 mg/m³);Skin OEL-POLAND:TWA 30 mg/m³;Skin OEL-RUSSIA:TWA 10 ppm (5 mg/m³);STEL 25 ppm (15 mg/m³);Skin;CAR OEL-SWEDEN:TWA 1 ppm (3 mg/m³);STEL 5 ppm (16 mg/m³);Skin;CAR OEL-SWITZERLAND:TWA 5 ppm (16 mg/m³);Skin;Carcinogen OEL-THAILAND:TWA 10 ppm (30 mg/m³);STEL 25 ppm (7 mg/m³) OEL-TURKEY:TWA 20 ppm (64 mg/m³);Skin OEL-UNITED KINGDOM:TWA 10 ppm (30 mg/m³) OEL IN BULGARIA, COLOMBIA, JORDAN, KO

REA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 75-07-0: OEL-ARAB Republic of Egypt:TWA 100 ppm (180 mg/m³) OEL-AUSTRALIA:TWA 100 ppm (180 mg/m³);STEL 150 pp (270 mg/m³) OEL-BELGIUM:TWA 100 ppm (180 mg/m³);STEL 150 ppm (270 mg/m³) OEL-CZECHOSLOVAKIA:TWA 200 mg/m³;STEL 400 mg/m³;CAR OEL-DENMARK:TWA 25 ppm (45 mg/m³) OEL-FINLAND:TWA 50 ppm (90 mg/m³);STEL 75 ppm (13 mg/m³) OEL-FRANCE:TWA 100 ppm (180 mg/m³) OEL-GERMANY:TWA 50 ppm (90 mg/m³);Carcinogen JAN9 OEL-HUNGARY:STEL 25 mg/m³;Carcinogen OEL-INDIA:TWA 100 ppm (180 mg/m³);STEL 150 ppm (270 mg/m³) OEL-THE NETHERLANDS:TWA 100 ppm (180 mg/m³) OEL-THE PHILIPPINES:TWA 200 ppm (360 mg/m³) OEL-POLAND:TWA 5 mg/m³ OEL-RUSSIA:STEL 5 mg/m³;Skin OEL-SWEDEN:TWA 25 ppm (45 mg/m³);STEL 50 ppm (90 mg/m³) OEL-SWITZERLAND:TWA 50 ppm (90 mg/m³);STEL 100 pp (180 mg/m³) OEL-TURKEY:TWA 200 ppm (360 mg/m³) OEL-UNITED KINGDOM:TWA 100 ppm (180 mg/m³);STEL 150 ppm OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 108-88-3: OEL-AUSTRALIA:TWA 100 ppm (375 mg/m³);STEL 150 ppm (560 mg/m³) OEL-BELGIUM:TWA 100 ppm (377 mg/m³);STEL 150 ppm (565 mg/m³) OEL-CZECHOSLOVAKIA:TWA 200 mg/m³;STEL 1000 mg/m³ OEL-DENMARK:TWA 50 ppm (190 mg/m³);Skin OEL-FINLAND:TWA 100 ppm (375 mg/m³);STEL 150 ppm;Skin OEL-FRANCE:TWA 100 ppm (375 mg/m³);STEL 150 ppm (560 mg/m³) OEL-GERMANY:TWA 100 ppm (380 mg/m³) OEL-HUNGARY:TWA 100 mg/m³;STEL 300 mg/m³;Skin OEL-JAPAN:TWA 100 ppm (380 mg/m³) OEL-THE NETHERLANDS:TWA 100 ppm (375 mg/m³);Skin OEL-THE PHILIPPINES:TWA 100 ppm (375 mg/m³) OEL-POLAND:TWA 100 mg/m³ OEL-RUSSIA:TWA 100 ppm;STEL 50 mg/m³ OEL-SWEDEN:TWA 50 ppm (200 mg/m³);STEL 100 ppm (400 mg/m³);Skin OEL-SWITZERLAND:TWA 100 ppm (380 mg/m³);STEL 500 ppm OEL-THAILAND:TWA 200 ppm;STEL 300 ppm OEL-TURKEY:TWA 200 ppm (750 mg/m³) OEL-UNITED KINGDOM:TWA 100 ppm (375 mg/m³);STEL 150 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 141-78-6: OEL-AUSTRALIA:TWA 400 ppm (1400 mg/m³) OEL-BELGIUM:TWA 400 ppm (1440 mg/m³) OEL-CZECHOSLOVAKIA:TWA 400 mg/m³;STEL 2000 mg/m³ OEL-DENMARK:TWA 300 ppm (1100 mg/m³) OEL-FINLAND:TWA 300 ppm (1100 mg/m³);STEL 500 ppm (1800 mg/m³) OEL-FRANCE:TWA 400 ppm (1400 mg/m³) OEL-GERMANY:TWA 400 ppm (1400 mg/m³) OEL-HUNGARY:TWA 400 mg/m³;STEL 1200 mg/m³ OEL-JAPAN:TWA 400 ppm (1400 mg/m³) OEL-THE NETHERLANDS:TWA 400 ppm (1400 mg/m³) JAN9 OEL-THE PHILIPPINES:TWA 400 ppm (1400 mg/m³) JAN9 OEL-POLAND:TWA 200 ppm OEL-RUSSIA:TWA 400 ppm;STEL 200 mg/m³ OEL-SWEDEN:TWA 150 ppm (500 mg/m³);STEL 300 ppm (1100 mg/m³) OEL-SWITZERLAND:TWA 400 ppm (1400 mg/m³);STEL 800 ppm OEL-TURKEY:TWA 400 ppm (1400 mg/m³) OEL-UNITED KINGDOM:TWA 400 ppm (1400 mg/m³) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 10/12/1998

Revision #3 Date: 8/24/2001

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

