Ethanol CDA 19

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

IDE Name: Ethanol CDA 19

IAC Number: A66-A60-4, A60-A60-1GAL, A60-A60-4

m/a: Ethanol, ethanol, denatured; Grain alcohol, denatured; Ethyl hydroxide, denatured; Methanol, denatured; Ethanol, denatured; Ethyl hydrate, denatured; Denaturant, denatured; Alginin, denatured.

Company Identification: Fisher Scientific

1 Regent Lane
Fairlawn, NJ 07410

or information, call: 201-795-7100

or emergency: 201-795-7100

or CHEMTREC assistance, call: 800-424-9300

or International CHEMTREC assistance, call: 703-527-3867

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

n/a: Ethanol, Ethyl alcohol

2-17: Methanol (petroleum), light all

64742-89: Solvent naphtha (petroleum), light all

Hazard Symbols: F
Risk Phrases: 11

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

precaution: clear, colorless. Flash Point: 16.66 dag C.
inhalation: liquid and vapor. Causes respiratory tract irritation. May cause digestive tract irritation. May cause central nervous system depression. May cause liver, kidney and other internal damage.

oral: moderate skin irritation. May cause severe eye irritation. May cause painful sensation to light. May cause chemical conjunctivitis and corneal damage.

Skin:

May cause skin irritation. May cause absorption through skin. May cause hyperesthesia of the extremities.

eyes:

May cause skin irritation with nausea, vomiting, diarrhea. May cause systemic toxicity with acidosis. May cause gastrointestinal irritation with nausea, vomiting, diarrhea, dizziness, drowsiness and coma. May cause respiratory tract irritation. May cause central nervous system depression, characterized by excitement, fatigue, fatigue, dizziness, drowsiness, and coma. In 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 central nervous system effects in high concentrations. Inhalation of high concentrations cause CNS depression. May cause dizziness or unconsciousness.

Chronic:

May cause liver and kidney damage. May cause fotal effects. May cause reproductive and fetal effects. Laboratory experiments have reported reproductive and embryonic effects. Animal studies have reported development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, or until tears cease flowing. Elevate upper and lower eyelids. Cover eyes with a sterile gauze pad or cloth. Call emergency medical services if irritation persists. For more information, consult a physician.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing in soap and water. Call emergency medical services if irritation persists. For more information, consult a physician.

Inhalation:

If victim is conscious and alert, give 2-4 cups of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Note to Physician:

Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central nervous system diseases may be at increased risk from exposure to this substance.

Antidote:

None reported.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

Containers can build up pressure if exposed to heat or fire. Keep away from heat, sparks or open flames.

Fire Fighting:

For small fires, use dry chemical, carbon dioxide or water spray or foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do not use straight streams of water.

Fire Extinguishment tip: Do not use water.

**** 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). Keep in suitable, closed containers. Use absorbent materials to recover spilled material. Use absorbent material to dispose of spill. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue. Empty closed containers. Keep away from heat, sparks and flames. Avoid contact with heat, sparks and flames. Avoid contact with heat, sparks and flames. Avoid contact with heat, sparks and flames. Avoid contact with heat, sparks and flames. Avoid contact with heat, sparks and flames.

Storage:

Keep away from heat, sparks, and flames. Keep away from sources of ignition. Use in a well-ventilated area. Unusual fire and explosion hazard. FLAMMABLE. Use of Rayon, paper, wood, cloth and other cellulosic materials is hazardous. Use adequate ventilation to keep airborne concentrations low. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**** SECTION 7 - HANDLING AND STORAGE ****

Engineering Controls:

Use proper personal protection equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a drench facility. Use adequate ventilation to keep airborne concentrations low. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

Chemical Name: Ethanol alcohol

ACGIH: 1000 ppm

NIOSH: 5000 ppm

OSHA: 1000 ppm TWA

OSHA: 1900 ppm TWA

Methylene isothiocyanate (petroleum), light all

ACGIH: 50 ppm

NIOSH: 75 ppm

OSHA: 100 ppm TWA

Solvent naphtha (petroleum), light all

ACGIH: none listed

NIOSH: none listed

OSHA: none listed

OSHA: 1900 ppm TWA

OSHA: 410 ppm TWA

OSHA: 500 ppm TWA
OSHA Vacated PELs:
- Rhodol alcohol - ACGIH A
- 1000 ppm TWA; 2000 mg/m³ TWA
- Methanol (methyl ethyl ketone) - 50 ppm TWA; 205 mg/m³ TWA; 75 ppm STEL; 300 mg/m³ TWA
- Solvent naphtha (petroleum); light aliphatic -
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 regulatory requirements 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:**
- A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator for respiratory exposures.

*** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ***

**Physical State:**
- Liquid

**Appearance:**
- Clear, colorless

**Odor:**
- Alcohol-like

**pH:**
- Not available

**Vapor Pressure:**
- 15 mm Hg

**Vapor Density:**
- 1.1 (Butyl acetate = 1)

**Vicinity:**
- Not available

**Boiling Point:**
- 174 deg F

**Freezing Point/Melting Point:**
- -131 deg F

**Auto-ignition Temp:**
- 363 deg C (688.40 deg F)

**Flash Point:**
- 16.66 deg C (61.99 deg F)

**Explosion Limits:**
- Lower: 1.3 vol %
- Upper: 19 vol %

**Solubility:**
- Miscible

**Specific Gravity/Density:**
- 0.8120

**Molecular Formula:**
- Mixture

**Molecular Weight:**
- Not available

*** SECTION 10 - STABILITY AND REACTIVITY ***

**Chemical Stability:**
- Stable under normal temperatures and pressures.

**Conditions to Avoid:**
- Incompatible materials, ignition sources, excess heat, oxidizers.

**Incompatibilities with Other Materials:**
- Strong oxidizing agents, acid, alkali metals, ammonia, borohydride, peroxides, sodium, acid anhydrides, calcium hydride, chromyl chloride, nitric perchlorate, brosine pentfluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tantalum, magnesium perchlorate, acid platinum, platinum halides, hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl dichloride, bichloroiodo-methylene, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate.

**Hazardous Decomposition Products:**
- Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:**
- Has not been reported.

*** SECTION 11 - TOXICOLOGICAL INFORMATION ***

**RTCSA:**
- CAS# 64-17-5; KEG0300000
- CAS# 108-13-8; SAGT76030

**LD₅₀ / LC₅₀:**
- CAS# 64-17-5; Draize test, rabbit, eye: 500 mg Severe; Draize test, rabbit, skin: 500 mg LD₅₀ 1/2H Mild; Draize test, rabbit, eye: 20 mg LD₅₀ 1 Republic; Inhalation, mouse: LC₅₀ = 39 gm/m³/4H; Inhalation, rat: LC₅₀ = 28500 ppm/1H; Oral, mouse: LD₅₀ = 24500 mg/kg; Oral, rat: LD₅₀ = 70000 mg/kg.

**CHEMMATCH:**
- CAS# 64-17-5; Draize test, rabbit, eye: 100 ul LD₅₀ 1/2H Moderate; Draize test, rabbit, skin: 500 mg LD₅₀ 1/2H; Inhalation, mouse: LC₅₀ = 23500 mg/m³/6H; Inhalation, rat: LC₅₀ = 160 gm/m³; Oral, mouse: LD₅₀ = 1900 mg/kg; Oral, rat: LD₅₀ = 2000 mg/kg.

**Carcinogenicity:**
- Rhodol alcohol - ACGIH A - Not Classifiable as a Human Carcinogen
- Methyl isobutyl ketone - Listed by ACGIH, IARC, NIOSH, NTP, or OSHA
- Solvent naphtha (petroleum), light aliphatic -

**Epidemiology:**
- Rhodol alcohol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome"

**Teratogenicity:**
- CAS# 64-17-5: Oral, Human - TDL₀ = 41 gm/kg (female 41 week(s) development) Intrauterine effects on Newborn. Other neonatal measures or effects and Effects on Newborn - drug dependence.

**Reproductive Effects:**
- CAS# 64-17-5: Intratrace, Human - TDL₀ = 200 mg/kg (female 5 day(s) pre-mating) Fertility: female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).

**Neurotoxicity:**
- No information available.

**Mutagenicity:**
- CAS# 64-17-5: DNA Inhibition: Human, Lymphocyte - 200 mmol/L; Cyto genetic Analysis: Human, Lymphocyte - 1500 mmol/L; Cyto genetic Analysis: Human, Fibroblast - 12000 ppm; Cyto genetic Analysis: Human, Leukocyte - 1 ppm/72H (Continuous); Sister Chromatid Exchange: Human, Lymphocyte - 500 ppm/72H (Continuous).

*** SECTION 12 - ECOLOGICAL INFORMATION ***

**Ecotoxicity:**
- Fish: Rainbow trout: LC₅₀ = 12900-15300 mg/L; 96 Hr: Flow-through 10-12C Fish: Rainbow trout: LC₅₀ = 11200 mg/L; 24 Hr: Fishger (Unspecified) Bacteria: Photobacterium phosphoreum: EC₅₀ = 34900 mg/L; 96 Hr: Microtox (Unspecified) Inland: on land it is apt to volatilize, biodegrade, and leach into the ground water, but effects from the biodegradation process could be found. Its fate in ground water is unknown. When released into water it will volatilize and biodegrade. It would not be expected to adsorb to sediment or biocuminate in fish.

*** SECTION 13 - DISPOSAL CONSIDERATIONS ***

**Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.**

**RCRA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must also refer to the hazardous waste regulations to ensure complete and accurate classification.**

**SCRA U-Series:**
- CAS# 108-10-1: waste number U161 (Ignitable waste).

*** SECTION 14 - TRANSPORT INFORMATION ***

**US DOT:**
- No information available.

**Canadian: No information available.

*** SECTION 15 - REGULATORY INFORMATION ***

**US FEDERAL:**
- TSCA:
  - CAS# 64-17-5 is listed on the TSCA inventory.
  - CAS# 108-10-1 is listed on the TSCA inventory.

- CAS# 64742-89-8 is listed on the TSCA Inventory.

- Health & Safety Reporting List

- Chemical Test Rules

- Section 10b: Some of the chemicals in this product are under a Chemical Test Rule. Section 10b: This product is covered by Section 40, subsections 4, 12B

- TSCA Significant New Use Rule

- Section 302 (Q): None of the chemicals in this material have a SNUR under TSCA.

- Section 303 (Q): None of the chemicals in this product have a TPQ.

- SARA Codes

- CAS# 108-10-1 final NQ = 5000 pounds (2270 kg)

- Section 313 (Q): None of the chemicals in this product have a TPQ.

- SARA Codes
This material contains Methyl isobutyl ketone (CAS# 108-10-1, 3 %), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act:
CAS# 108-10-1 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class I ozone depletors.
This material does not contain any Class 2 ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
Ethyl alcohol can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Methyl isobutyl ketone can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Solvent naphtha (petroleum), light aliphatic is not present on state lists from CA, PA, NH, MA, FL, or MO.
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:
None of the chemicals in this product are listed.

European International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: F
Risk Phrases: R11 Highly flammable.
Safety Phrases: S7 Keep container tightly closed.
S16 Keep away from sources of ignition - No smoking.

WOK (Water-Hazard Protection)
CAS# 64-17-5: 6
CAS# 108-10-1: 1
CAS# 6742-89-8: No information available.

United Kingdom Occupational Exposure Limits:
CAS# 64-17-5: OES-United Kingdom, TWA 1000 ppm TWA; 1920 mg/m3 TWA
CAS# 108-10-1: OES-United Kingdom, STEL 160 ppm STEL; 416 mg/m3 STEL
CAS# 6742-89-8: OES-United Kingdom, STEL 160 ppm STEL; 416 mg/m3 STEL

Canada
CAS# 64-17-5 is listed on Canada's DSL List.
CAS# 108-10-1 is listed on Canada's DSL List.
CAS# 6742-89-8 is listed on Canada's DSL List.
This product has a WHOIS classification of D2, D4A.
CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.
CAS# 108-10-1 is listed on Canada's Ingredient Disclosure List.
CAS# 6742-89-8 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 (1900 mg/m3)
OEL-CZECHOSLOVAKIA:TWA 1000 ppm (1900 mg/m3)
OEL-DENMARK:TWA 1000 ppm (1900 mg/m3)
OEL-FINLAND:TWA 1000 ppm (1900 mg/m3)
OEL-IRELAND:TWA 1000 ppm (1900 mg/m3)
OEL-ITALY:TWA 1000 ppm (1900 mg/m3)
OEL-GERMANY:TWA 1000 ppm (1900 mg/m3)
OEL-HUNGARY:TWA 1000 ppm (1900 mg/m3)
OEL-NETHERLANDS:TWA 1000 ppm (1900 mg/m3)
OEL-PORTUGAL:TWA 1000 ppm (1900 mg/m3)
OEL-POLAND:TWA 1000 ppm (1900 mg/m3)
OEL-RUSSIA:TWA 1000 ppm (1900 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)
OEL-UNITED STATES:TWA 1000 ppm (1900 mg/m3)
OEL-STRONGHOLD: TWA 1000 ppm (1900 mg/m3)
OEL-DENMARK: TWA 1000 ppm (1900 mg/m3)

**** SECTION 16 - ADDITIONAL INFORMATION ****

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of