

FISHER SCIENTIFIC CO. CHEMICAL MFG DIV -- A995-4, REAGENT ALCOHOL -- 6810-01-327-7088

===== Product Identification =====

Product ID:A995-4, REAGENT ALCOHOL

MSDS Date:08/02/2000

FSC:6810

NIIN:01-327-7088

Status Code:A

MSDS Number: CLSFB

=== Responsible Party ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ

ZIP:07410-2802

Country:US

Info Phone

Num:201-796-7100

Emergency Phone Num:201-796-7100

Resp. Party Other MSDS Num.:08701

Preparer's Name:NOT PROVIDED

Chemtrec Ind/Phone:(800)424-9300

CAGE:1B464

=== Contractor Identification ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

Box:City:FAIRLAWN

State:NJ

ZIP:07410-2802

Country:US

Phone:201-796-7100

CAGE:1B464

Company Name:GIGA INC.

Address:2448 INDUSTRIAL PARK DRIVE

Box:4265

City:MACON

State:GA

ZIP:31208

Country:US

Phone:912-788-2448

Contract Num:SP0450-02

-M-M189
CAGE:8S706

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Composition/Information on Ingredients
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Ingred Name:ETHYL ALCOHOL
CAS:64-17-5
RTECS #:KQ6300000
Minumum % Wt:89.
Maxumum % Wt:91.
Other REC Limits:NIOSH 1000 PPM
OSHA PEL:1900 MG/M3;1000 PPM
ACGIH TLV:1880 MG/M3;1000 PPM

Ingred Name:METHYL ALCOHOL
CAS:67-56-1
RTECS #:PC1400000
Minumum % Wt:4.5
Maxumum % Wt:5.5
Other REC Limits:NIOSH: 200 PPM
OSHA PEL:260 MG/M3;200 PPM
ACGIH TLV:262 MG/M3;200 PPM
ACGIH STEL:328 MG/M3;250 PPM
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ISOPROPYL ALCOHOL
CAS:67-63-0
RTECS #:NT8050000
Minumum % Wt:4.5
Maxumum % Wt:5.5
Other REC Limits:NIOSH: 400 PPM
OSHA PEL:980 MG/M3;400 PPM
ACGIH TLV:983 MG/M3;400 PPM
ACGIH STEL:1230 MG/M3;500 PPM

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Hazards Identification
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LD50 LC50 Mixture:NOT PROVIDED
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYE: CAUSES SEVERE EYE IRRITATION,
PAINFUL SENSITIZATION TO LIGHT, CHEMICAL

CONJUNCTIVITIS, CORNEAL

DAMAGE. SKIN: CAUSES MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. MAY CAUSE CYANOSIS OF THE EXTREMITIES. INGESTION: MAY BE FATAL/CAUSE BLINDNESS IF SWALLOWED WITH SYSTEMIC TOXICITY AND ACIDOSIS. MAY CAUSE LIVER, KIDNEY DAMAGE, CNS DEPRESSION (EXCITEMENT, HEADACHE, DIZZINESS, DROWSINES S, NAUSEA), COLLAPSE, UNCONSCIOUSNESS, COMA AND POSSIBLE DEATH. INHALATION: HIGH CONCENTRATIONS MAY CAUSE EFFECTS SIMILAR TO THOSE DESCRIBED

FOR INGESTION. CHRONIC: SIMILAR TO THOSE OF ACUTE INHALATIO N, INGESTION, SKIN.

Explanation of 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

Effects of Overexposure: EYE: CAUSES SEVERE EYE IRRITATION, PAINFUL SENSITIZATION TO LIGHT, SKIN: CAUSES MODERATE SKIN IRRITATION. MAY CAUSE CYANOSIS OF THE EXTREMITIES. INGESTION: MAY CAUSE BLINDNESS IF SWALLOWED. MAY CAUSE LIVER, KIDNEY DAMAGE, CNS DEPRESSION (EXCITEMENT, HEADACHE, DIZZINESS, DROWSINESS, NAUSEA), COLLAPSE, UNCONSCIOUSNESS, COMA AND POSSIBLE DEATH. INHALATION: HIGH CONCENTRATIONS MAY CAUSE EFFECTS SIMILA R TO THOSE DESCRIBED FOR INGESTION.

Medical Cond Aggravated by Exposure: PERSONS WITH SKIN OR EYE DISORDERS OR LIVER, KIDNEY, CHRONIC RESPIRATORY DISEASES, OR CENTRAL AND PERIPHERAL NERVOUS SYTEM DISEASES MAY BE AT INCREASED RISK FROM EXP OSURE TO THIS SUBSTANCE.

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===== First Aid Measures =====

First Aid: EYES: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING LIDS. GET MEDICAL AID IMMEDIATELY. SKIN: GET MEDICAL AID. IMMEDIATELY FLUSH 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 PER SON. GET MEDICAL AID. INDUCE VOMITING BY GIVING 1 TEASPOON SYRUP OF IPECAC. INHALATION: GET MEDICAL AID IMMEDIATELY. REMOVE TO FRESH AIR IMMEDIATELY. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF B REATHING DIFFICULT, GIVE OXYGEN.

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===== Fire Fighting Measures =====

Flash Point: =12.8C, 55.F
Autoignition Temp: =362.8C, 685.F
Lower Limits: 3.3 (ETHANOL)
Upper Limits: 19 (ETHANOL)
Extinguishing Media: USE WATER, DRY CHEMIC

AL, CHEMICAL FOAM,
ALCOHOL-RESISTANT-FOAM. DO NOT USE STRAIGHT STREAMS OF WATER. LARGE
FIRE: DRY CHEMICAL, CARBON DIOXIDE, ALCOHOL-RESISTANT FOAM.

Fire Fighting Procedures:AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING
APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT)
AND FULL PROTECTIVE GEAR. USE WATER SPRAY TO COOL FIRE-EXPOSED
CONTAINERS. COOL CONTAINERS WITH FLOODING QUANTITIES OF WATER
UNTIL WELL AFTER FIRE IS OUT.

Unusual Fire/Explosion Hazard:VAPORS
MAY FORM AN EXPLOSIVE MIXTURE WITH
AIR. VAPORS CAN TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK.
CONTAINERS MAY EXPLODE IN HEAT OF FIRE. FLAMMABLE LIQUID. MAY FORM
EXPLOSIVE PEROXIDES. VAPORS ARE HEAVIER THAN AIR. THEY CAN SPREAD
ALONG THE GROUND AND COLLECT IN LOW OR CONFINED AREAS.

===== Accidental Release Measures =====

Spill Release Procedures:USE PROPER PERSONAL PROTECTIVE EQUIPMENT.
ABSORB SPILL WITH INERT MATERIAL (E.G. DRY SAND OR EA
RTH), THEN
PLACE INTO A CHEMICAL WASTE CONTAINER. REMOVE ALL SOURCES OF
IGNITION. A VAPOR SUPPRESSING FOAM MAY BE USED TO REDUCE VAPORS.
Neutralizing Agent:NOT RELEVANT

===== Handling and Storage =====

Handling and Storage Precautions:KEEP AWAY FROM HEAT, SPARKS, FLAME AND
OTHER SOURCES OF IGNITION. STORE IN A TIGHTLY CLOSED CONTAINER.
STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE
SUBSTANCES. AVOID CONTACT WITH HEAT,
SPARKS AND FLAME. USE WITH
ADEQUATE VENTILATION. GROUND AND BOND CONTAINERS WHEN TRANSFERRING.
Other Precautions:WASH THOROUGHLY AFTER HANDLING. AVOID CONTACT WITH
EYES, SKIN AND CLOTHING. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE
AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER,
DRILL, GRIND OR EXPOSE EMPTY CONTAINERS TO HEAT SPARKS OR OPEN
FLAMES.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:FOLLOW THE OSHA RE

RESPIRATOR REGULATIONS FOUND IN

29 CFR 1910.134 OR EUROPEAN STANDARD EN 149. ALWAYS USE A NIOSH OR EUROPEAN STANDARD EN 149 APPROVED RESPIRATOR.

Ventilation:USE ADEQUATE GENERAL OR LOCAL EXHAUST VNTILATION TO KEEP AIRBORNE CONCENTRATIONS BELOW THE PERMISSABLE EXPOSURE LIMITS.

Protective Gloves:APPROPRIATE PROTECTIVE GLOVES TO PREVENT SKIN EXPOSURE.

Eye Protection:APPROPRIATE PROTECTIVE EYEGLASSES OR CHEMICAL SAFETY GOGGLES (29 CFR 1910.133).

Other Protective Equipment:WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT SKIN EXPOSURE.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

NOTES TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ANTIDOTE: ETHANOL MAY INHIBIT METHANOL METABOLISM. N/A = NOT APPLICABLE.

N/AV = NOT AVAILABLE. N/K = UNKNOWN. N/P = NOT PROVIDED. N/R = NOT RELEVANT. N/D = NOT DETERMINED. N/E = NOT ESTABLISHED. CNS = CENTRAL NERVOUS SYSTEM. GI = GASTROINTESTINAL.

===== Physic
al/Chemical Properties =====

HCC:F2

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:=78.5C, 173.3F

Melt/Freeze Pt:=-114.1C, -173.4F

Decomp Temp:Decomp Text:NOT AVAILABLE

Vapor Pres:44 MM HG

Vapor Density:1.6 ETOH

Spec Gravity:0.8

pH:NO DATA

Viscosity:1.2 CP

Evaporation Rate & Reference:NOT PROVIDED

Solubility in Water:SOLUBLE

Appearance and Odor:CLEAR, COLORLESS LIQUID; FRAGRANT ODOR

Percent Volatiles by Volume:NOT PROVIDED

Corrosion Rate:NOT PROVIDED

===== Stability a

nd Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

NON-OXIDIZING MINERAL ACIDS; OXIDIZING MINERAL ACIDS; ORGANIC ACIDS;
AZO, DIAZO HYDRAZINES; ISOCYANATES; METALS; NITRITES; PEROXIDES &
HYDROPEROXIDES; EPOXIDES; OXIDIZING AGENTS; REDUCING AGENTS; WATER
REACTIVE SUBSTANCES.

Stability Condition to Avoid: THIS MATERIAL MAY BE SENSITIVE TO PEROXIDE
FORMATION, INCOMPATIBLE MATERIALS, IGNITION SOURCES.

Hazardous Decomposition Products: CARBON MONOXIDE, CARB
ON DIOXIDE.

===== Toxicological Information =====

Toxicological Information: LD50/LC50: CAS# 64-17-5: 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; CA S# 67-56-1: 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 =
15
800 MG/KG; CAS# 67-63-0: ORAL, MOUSE: LD50 = 3600 MG/KG; ORAL,
RABBIT: LD50 = 6410 MG/KG; ORAL, RAT: LD50 = 5045 MG/KG; SKIN,
RABBIT: LD50 = 12800 MG/KG;

===== Ecological Information =====

Ecological: ECOTOXICITY: CAS# 64-17-5: WHEN SPILLED ON LAND IT IS APT TO
VOLATILIZE, BIODEGRADE, AND LEACH INTO THE GROUND WATER, BUT NO
DATA ON THE RATES OF THESE PROCESSES COULD BE FOUND. ITS FATE IN
GROUND WATER IS UNKNOWN. WHEN RELEASED INTO WATER I
T WILL
VOLATILIZE AND PROBABLY BIODEGRADE. IT WOULD NOT BE EXPECTED TO
ADSORB TO SEDIMENT OR BIOCONCENTRATE IN FISH. ENVIRONMENTAL FATE:
CAS# 64-17-5: WHEN RELEASED TO THE ATMOSPHERE IT WILL PHOTODEGRADE
IN HOURS (POLLUTED URBAN ATMOSPHERE) TO AN ESTIMATED RANGE OF 4 TO
6 DAYS IN LESS POLLUTED AREAS. RAINOUT SHOULD BE SIGNIFICANT.
PHYSICAL/CHEMICAL: NOT AVAILABLE.

===== Disposal Considerations =====

Waste Disposal Methods: WASTE GENERE

RATORS MUST DETERMINE WHETHER A DISCARDED CHEMICAL IS CLASSIFIED AS A HAZARDOUS WASTE. US EPA GUIDELINES FOR CLASSIFICATION DETERMINATION ARE LISTED IN 40 CFR PARTS 261.3. ADDITIONALLY, WASTE GENERATORS MUST CONSULT STATE AND LOCAL HAZARDOUS WASTE REGULATIONS TO ENSURE ACCURATE CLASSIFICATION. WASTE NUMBERS: U154, U002, U019.

===== MSDS Transport Information =====

Transport Information:US DOT SHIPPING NAME: DENATURED ALCOHOL
HAZARD C
LASS: 3 UN NUMBER: NA1987 PACKING GROUP: II

===== Regulatory Information =====

SARA Title III Information:SECTION 302 (RQ) CAS# 67-56-1: 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. SECTION 313 THIS MATERIAL CONTAINS METHYL ALCOHOL (CAS# 67-56-1, 45.5%), 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, 45.5%), WHICH IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III AND 40 CFR PART 373.

Federal Regulatory Information:CLEAN AIR ACT: CAS# 67-56-1 IS LISTED AS A HAZARDOUS AIR POLLUTANT (HAP). CLEAN WATER ACT: NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS HAZARDOUS SUBSTANCES UNDER

THE CWA. OSHA: NONE OF THE CHEMICALS IN THIS PRODUCT ARE CONSIDERED HIGHLY HAZARDOUS BY OSHA. 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.

State Regulatory Information:CAS# 64-17-5, CAS# 67-56-1 AND CAS# 67-63-0 CAN BE FOUND ON THE FOLLOWING STATE RIGHT TO KNOW LISTS: CALIFORNIA, NEW JERSEY, FLORIDA, PENNSYLVANIA, MINNESOTA, MASSACHUSETTS. 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.

===== Other Information =====

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