Product ID:ACETONE MSDS Date:01/04/2001 FSC:6810 NIIN:00-264-8955 Status Code:A MSDS Number: CLRPG === Responsible Party === Company Name: FISHER SCIENTIFIC CO. CHEMICAL MFG DIV Address:1 REAGENT LANE City:FAIRLAWN State:NJ ZIP:07410-2802 Country:US Info Phone Num:201-796-7100 Emergency Phone Num: (800) 424-9300 Resp. Party Other MSDS Num.: ACC#00140 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 Ingred Name: ACETONE CAS:67-64-1 RTECS #:AL3150000 = Wt:99. OSHA PEL:2400 MG/M3;1000 PPM ACGIH TLV:500 PPM ACGIH STEL:750 PPM EPA Rpt Qty:5000 LBS

====== Hazards I

DOT Rpt Qty:5000 LBS

dentification =======================

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:ACUTE: CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. MAY CAUSE LIVER AND KIDNEY DAMAGE. CAUSES EYE AND SKIN IRRITATION. CHRONIC: DERMATITIS, CHRONIC INHALATION EFFE CTS ARE SIMILAR TO THOSE OF ACUTE. TARGET ORGANS: KIDNEYS, CENTAL NERVOUS SYSTEM, LIVER, RESPIRATORY SYSTEM, EYES, SKIN.

Explanation of Carcinogenicity:CAS

# 67-64-1: ACGIH: A4 - NOT

CLASSIFIABLE AS A HUMAN CARCINOGEN

Effects of Overexposure:EYE: PRODUCES IRRITAION, CHARACTERIZED BY A BURNING SENSATION, REDNESS, TEARING, INFLAMMATION, AND POSSIBLE CORNEAL INJURY. DKIN: EXPOSURE MAY CAUSE IRRITATION CHARACTERIZED BY REDNESS, DRYNESS, AND I NFLAMMATION. INGESTION: MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, KIDNEY DAMAGE, AND LIVER DAMAGE. SYMPTOMS MAY INCLUDE: HEADACHE, EXCITE

MENT, FATIGUE, NAUSEA, VOMITIN, STUPOR, AND COMA. MAY CAUSE LIVER AND KIDNEY DAMAGE. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, CHARACTERIZED BY EXCITEMENT, FOLLOWED BY HEADACHE, DIZZINESS, DROWSINESS, AND NAUSEA. SEE OTHER INFORMATION).

First Aid:EYES: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. GET MEDICAL AID IMMEDIATLEY. SKIN: FLUSH SKIN

WITH PLENTY OF SOAP AND

WATER FOR AT LEAS T 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL AID IF IRRITATION DEVELOPS OR PERSISTS. WASH CLOTHING BEFORE REUSE. INGESTION: DONOT INDUCE VOMITING. IF VICTIM IS CONSCIOUS AN D ALERT, GIVE 2-4 CUPFULS OF MILK OR WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL AID IMMEDIATELY. SEE SUPPLEMENTAL DATA.

Flash Poin

t:=-20.C, -4.F Autoignition Temp:=465.C, 869.F Lower Limits:2.5 Upper Limits:12.8 Extinguishing Media:SMALL FIRES: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR ALCOHOL-RESISTANT FOAM. LARGE FIRES: WATER SPRAY, FOG, OR ALCOHOL-RESISTANT FOAM. WATER MAY BE INEFFECTIVE. Fire Fighting Procedures: WEAR A SELF-CONTAINED BREATHING APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR. USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS. DO NOT USE ST RAIGHT STEAMS OF WATER. COOL CONTAINERS WITH FLOODING QUANTITIES OF WATER UNTIL WELL AFTER FIRE IS OUT. Unusual Fire/Explosion Hazard: VAPORS MAY FORM AND EXPLOSIVE MIXTURE WITH AIR. VAPORS CAN TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. DURING A FIRE. IRRITATING AND HIGHLY TOXIC GASES MAY BE GENERATED BY THERMAL DECOMPOSITION OR COMBUSTION.EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPORS MAY BE HEAVIER THAN AIR.

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Spill Release Procedures: USE PROPER PERSONAL PROTECTIVE EQUIPMENT. ABSORB SPILL WITH INERT MATERIAL (E.G. VERMICULITE, DAND OR EARTH), THEN PLACE IN SUITABLE CONTAINER. AVOID RUNOFF INTO STORM SEWERS AND DITCHES WHICH LEAD TO WATERWAYS. WEAR APPROPRIATE PROTECTIVE CLOTHING TO MINIMIZE CONTACT WITH SKIN. REMOVE ALL SOURCES OF IGNITION. A VAPOR SUPPRESSING FOAM MAY BE USED RO REDUCE VAPORS.

Handling an

d Storage Precautions: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. FLAMMABLE S-AREA. WASH THOROUGHLY AFTER HANDLING. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE. Other Precautions:USE ONLY IN A WELL-VENTILATED AREA. GROUND AND BOND CONTAINERS WHEN TRANSFERRING MATERIAL. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. EMPTY C ONTAINERS 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 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. Ventilation: USE ADEQUAE GENERAL OR LOCAL

EXHAUST VENTILATION TO KEEP

AIRBORNE CONCENTATIONS BELOW THE PERMISSIBLE EXPOSURE LIMITS. Protective Gloves: APPROPRIATE PROTECTIVE GLOVES.

Eye Protection:CHEMICAL GOGGLES.

Other Protective Equipment: FACILITIES STORING OR UTILIZING THIS MATERIAL SHOULD BE EQUIPPED WITH AN EYEWASH FACILITY AND A SAFETY SHOWER.

Supplemental Safety and Health

FIRST AID CONT: INHALATION: GET MEDICAL ATTENTION IMMEDIATELY. REMOVE FROM EXPOSURE TO FRESH AIR IMMEFDIATELY. IF NOT BREATHING, GIVE ARTIF

ICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GE T MEDICAL AID. DO NOT USE MOUTH-TO-MOUTH RESPIRATION. IF BRATHING HAS CEASED APPLY ARTIFICIAL RESPIRATION USING OXYGEN

HCC:F2 Boiling Pt:=56.2C, 133.2F Melt/Freeze Pt:=59.8C, 139.6F Vapor Pres:180 MM HG Vapor Density:2.0 Spec Gravity:0.79 pH:7 Evaporation Rate & amp; Reference:7.7 (N-BUTYL ACETATE=1) Solubility in Water:SOLUBLE Appearance and Odor:COLORLESS LIQUID, ACETONE-LIKE ODOR.

Stability Indicator/Materials to Avoid:YES

ACIDS (MINERAL, NON-OXIDIZING, E.G. HYDROCHLORIC ACID, HYDROFLUORIC ACID, MURIATIC ACID, PHOSPHORIC ACID), ACIDS (MINERAL, OXIDIZING, ELGL CHROMIC ACID, HYPOCHLOROUS ACID, NITRIC ACID, SULFURIC ACID), ACIDS (ORGANIC, E.G. A Stability Condition to Avoid:HIGH TEMPERATURES, IGNITION SOURCES, TEMPERATURES ABOVE 220 C.

Hazardous Decomposition Prod

ucts:CARBON MONOCIDE, IRRITATING AND TOXIC FUMES AND GASES, CARBON DIOXIDE. Conditions to Avoid Polymerization:HAS NOT BEEN REPORTED.

Toxicological Information:CAS# 67-64-1. LD50/LC50: DERMAL, GUINEA PIG: LD50 = >9400 MICROLITER/KG; DRAIZE TEST, RABBIT, EYE: 20 MG SEVERE; DRAIZE TEST, RABBIT, EYE: 20 MG/24H MODERATE; DRAIZE TEST, RABBIT, SKIN: 500 MG/24H MIL D; INHALATION, MOUSE: LC50 = 44 GM/M3/4H; INHALATI

ON, RAT: LC50 = 50100 MG/M3/8H; ORAL, MOUSE: LD50 = 3 GM/KG; ORAL, RABBIT: LD50 = 5340 MG/KG;ORAL, RAT: LD50 = 5800 MG/KG; REPRODUCTIVE EFFECTS: TDLO( ORAL, RAT) = 273 GM/KG;REPRODUCTIVE - PATERNAL EFFECTS - SPERMATOGENESIS (INCL. GENETIC MATERIAL, SPERM MORPHOLOGY, MOTILITY, AND COUNT). NEUROTOXICITY: NO INFO AVILABLE. MUTAGENICITY:SEX CHROMOSOME L OSS AND NONDISJUNCTION= 47600 PPM;

Ecological:ECOTOXI

CITY: RAINBOW TROUT LC50=5540 MG/L/96H SUNFISH (TAP WATER), DEATH AT 14250 PPM/24H MOSQUITO FISH (TURBID WATER) TLM=13000 PPM/48HCAS# 67-64-1:LC50 (96HR.) RAINBOW TROUT = 5540 MG/L; STATIC COND ITIONS, 11-13 DEGREES CLC50 (96HR) FATHEAD MINNOW = 7280-8120 MG/L; FLOW-THROUGH CONDITIONSLC50 (96HR) BLUEGILL =8300 MG/L. IF RELEASED ON SOIL, ACETONE WILL BOTH VOLATILIZE AND LEACH INTO GROUND,& RE ADILY BIODEGRADES. IF RELEASED INTO WATER, ACETONE WILL PROBABLY BIODEGRADE.

ABSORPTION TO SEDIMENT SHOULD NOT BE SIGNIFICANT. IN THE ATMOSPHERE, ACETONE WILL BE LOST BY PHOTOLYSIS & BY REACTION WITH HYDOXYL RADICALS.

Waste Disposal Methods: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. ADDIT IONALLLY, WASTE GENERATORS MUST CONSULT STATE AND LOCAL HAZARDOUS WASTE REGULATION TO ENSURE COMPLET E AND ACCURATE CLASSIFICATION.

Transport Information:US DOT: SHIPPING NAME: ACETONE, HAZARD CLASS: 3, UN NUMBER:UN 1090, PACKING GROUP:II,

SARA Title III Information:SECTION 302 (RQ) CAS# 67-64-1: FINAL RQ = 5000 POUNDS (2270 KG). SEC 302 (TPQ): NONE. SARA CODES CAS # 67-64-1: ACU

TE, CHRONIC, FLAMMABLE, SUDDEN RELEASE OF PRESSURE. 311: NO CHEMICALS ARE REPORTABLE UNSEC 313. CLEAN AIR ACT:THIS MATERIAL DOES NOT CONTAIN ANY HAZARDOUS AIR POLLUTANTS. THIS MATERIAL DOES NOT CONTAIN ANY CLASS 1 OZONE DEPLETORS. THIS MATERIAL DOES NOT CONTAIN ANY CLASS 2 OZONE DEPLE TORS. CLEAN WATER ACT: NOT LISTED AS HAZARDOUS SUBSTANCE, PRIORITY POLUTANTS & TOXIC POLLUTANT UNDER CWA.

Federal Regulatory Information:TSCA: CAS# 67-64-1 IS LISTED ON THE TSCA INVENT

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

State Regulatory Information:CAS# 67-64-1 CAN BE FOUND ON THE FOLLOWING STATE RIGHT TO KNOW LISTS: CALIFORNIA, NEW JERSEY, FLORIDA, PENNSYLVANIA, MINNESOTA, MASSACHUSETTS. CALIFORNIA NO SIGNIFICANT RISK LEVEL: NONE OF THE CHEMICA LS IN THIS PRODUCT ARE LISTED. CANADA: CAS 67-64-1 IS LISTED ON CANADA'S DSL/NDSL LIST. THIS PRODUCT HAS A WHMIS CLASSIFICATION OF B2, D2B., AND IS ALSO LIS TED

ON CADADA'S INGREDIENT DISCLOSURE LIST.

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