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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| | |
|---------------------------------|---|
| CATALOG #: | 32009 |
| NAME: | Acetaldehyde |
| SYNONYMS: | Ethanal |
| 24 HOUR EMERGENCY TELEPHONE: | (800) 535-5053(USA) 352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS: | (800) 869-9290 |
| CUSTOMER SERVICE: | (630) 766-2112 |

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

FLAMMABLE LIQUIDS (CATEGORY 1), H224

EYE IRRITATION (CATEGORY 2A), H319

CARCINOGENICITY (CATEGORY 2), H351

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3),
RESPIRATORY SYSTEM, H335

ACUTE AQUATIC TOXICITY (CATEGORY 3), H402
FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM**



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H224 EXTREMELY FLAMMABLE LIQUID AND VAPOUR
H319 CAUSES SERIOUS EYE IRRITATION.
H335 MAY CAUSE RESPIRATORY IRRITATION
H351 SUSPECTED OF CAUSING CANCER
H402 HARMFUL TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE
BEEN READ AND UNDERSTOOD.
P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT
SURFACES. NO SMOKING.
P233 KEEP CONTAINER TIGHTLY CLOSED.
P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT
P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/
LIGHTING/ EQUIPMENT
P242 USE ONLY NON-SPARKING TOOLS.
P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC
DISCHARGE
P261 AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/
SPRAY.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE
PROTECTION/ FACE PROTECTION.
P303 + P361 + P353 IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY
ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/
SHOWER.
P304 + P340 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP
COMFORTABLE FOR BREATHING. CALL A POISON
CENTER/DOCTOR IF YOU FEEL UNWELL.
P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
EASY TO DO. CONTINUE RINSING.
P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/
ATTENTION
P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/
ATTENTION.
P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
ALCOHOL-RESISTANT FOAM TO EXTINGUISH
P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER
TIGHTLY CLOSED.
P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.

P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS MAY FORM EXPLOSIVE PEROXIDES.
PHOTOSENSITIZER.
LACHRYMATOR.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C₂H₄O
MW: 44.05
CAS-NO. 75-07-0
PURITY: ≥ 99%

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|--------------|---|---------------|
| Acetaldehyde | FLAM. LIQ. 1; EYE IRRIT. 2A; CARC. 2; STOT SE 3; AQUATIC ACUTE 3; H224, H319, H335, H351, H402 | 90 - 100 % |

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE. MOVE OUT OF DANGEROUS AREA.

IF INHALED IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.

IN CASE OF SKIN CONTACT WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.

IN CASE OF EYE CONTACT RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

| | |
|---|--|
| IF SWALLOWED | DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN |
| MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED | THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11 |
| INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED | NO DATA AVAILABLE |

SECTION 5. FIRE AND EXPLOSION DATA

| | |
|--|--|
| EXTINGUISHING MEDIA | |
| SUITABLE EXTINGUISHING MEDIA | DRY POWDER DRY SAND |
| UNSUITABLE EXTINGUISHING MEDIA | DO NOT USE WATER JET. |
| SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE | NO DATA AVAILABLE |
| ADVICE FOR FIREFIGHTERS | WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY. |
| FURTHER INFORMATION | USE WATER SPRAY TO COOL UNOPENED CONTAINERS. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

| | |
|--|---|
| PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES | USE PERSONAL PROTECTIVE EQUIPMENT. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS. FOR PERSONAL PROTECTION SEE SECTION 8. |
| ENVIRONMENTAL PRECAUTIONS | PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. |

DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

CONTAIN SPILLAGE, AND THEN COLLECT WITH NON-COMBUSTIBLE ABSORBENT MATERIAL, (E.G. SAND, EARTH, DIATOMACEOUS EARTH, VERMICULITE) AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL / NATIONAL REGULATIONS (SEE SECTION 13).

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. USE EXPLOSION-PROOF EQUIPMENT. KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.

RECOMMENDED STORAGE TEMPERATURE Store at 0-8°C

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

| COMPONENT | CAS-NO. | VALUE | CONTROL PARAMETERS | BASIS |
|--------------|---------|-------|--------------------|---|
| Acetaldehyde | 75-07-0 | C | 25.000000 PPM | USA. ACGIH THRESHOLD LIMIT VALUES (TLV) |

| | | | | |
|--|---------|--|------------------------------------|---|
| | REMARKS | UPPER RESPIRATORY TRACT IRRITATION EYE IRRITATION ADOPTED VALUES OR NOTATIONS ENCLOSED ARE THOSE FOR WHICH CHANGES ARE PROPOSED IN THE NIC SEE NOTICE OF INTENDED CHANGES (NIC) CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS | | |
| | | POTENTIAL OCCUPATIONAL CARCINOGEN SEE APPENDIX C SEE APPENDIX A | | |
| | | TWA | 200.000000 PPM 360.000000 MG/M3 | USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS |
| | | THE VALUE IN MG/M3 IS APPROXIMATE | | |
| | | C | 25 PPM | USA. ACGIH THRESHOLD LIMIT VALUES (TLV) |
| | | UPPER RESPIRATORY TRACT IRRITATION EYE IRRITATION 2015 ADOPTION SUSPECTED HUMAN CARCINOGEN | | |
| | | POTENTIAL OCCUPATIONAL CARCINOGEN SEE APPENDIX C SEE APPENDIX A | | |
| | | TWA | 200 PPM 360 MG/M3 | USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS |
| | | THE VALUE IN MG/M3 IS APPROXIMATE | | |
| | | TWA | 100 PPM 180 MG/M3 | USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000 |
| | | STEL | 150 PPM 270 MG/M3 | USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000 |
| | | C | 25 PPM 45 MG/M3 | CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS (TITLE 8, ARTICLE 107) |

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

**EYE/FACE
PROTECTION**

FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

SKIN PROTECTION

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

BREAKTHROUGH TIME IS NOT DETERMINED FOR THE PRODUCT. CHANGE GLOVES OFTEN!

FULL CONTACT

MATERIAL: BUTYL-RUBBER

MINIMUM LAYER THICKNESS: 0.7 MM

BREAK THROUGH TIME: >480 MIN

MATERIAL TESTED: BUTOJECT (KCL 898)

BREAKTHROUGH TIME IS NOT DETERMINED FOR THE PRODUCT. CHANGE GLOVES OFTEN!

SPLASH CONTACT

MATERIAL:

MINIMUM LAYER THICKNESS: 0.65 MM

BREAK THROUGH TIME: > 10 MIN

MATERIAL TESTED:

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS

BODY PROTECTION

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

**RESPIRATORY
PROTECTION**

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

CONTROL OF ENVIRONMENTAL EXPOSURE

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| APPEARANCE | Colorless clear liquid |
| ODOUR | NO DATA AVAILABLE |
| ODOUR THRESHOLD | NO DATA AVAILABLE |
| PH | 5 AT 20 °C |
| MELTING POINT/FREEZING POINT | - 125 °C |
| INITIAL BOILING POINT AND BOILING RANGE | 21 °C |
| FLASH POINT | -40°C |
| EVAPORATION RATE | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, GAS) | NO DATA AVAILABLE |
| UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS | UPPER EXPLOSION LIMIT: 60 %(V) LOWER EXPLOSION LIMIT: 4 %(V) |
| VAPOUR PRESSURE | 1,008.5 HPA (756.4 MMHG) AT 20 °C 1,451 HPA (1,088 MMHG) AT 30 °C 2,660 HPA (1,995 MMHG) AT 55 °C |
| VAPOUR DENSITY | 1.52 - (AIR = 1.0) |
| RELATIVE DENSITY | 0.79 |
| WATER SOLUBILITY | COMPLETELY MISCIBLE |
| PARTITION COEFFICIENT: N- OCTANOL/WATER | LOG POW: 0.5 |
| AUTO-IGNITION TEMPERATURE | NO DATA AVAILABLE |
| DECOMPOSITION TEMPERATURE | NO DATA AVAILABLE |
| VISCOSITY | NO DATA AVAILABLE |
| EXPLOSIVE PROPERTIES | NO DATA AVAILABLE |
| OXIDIZING PROPERTIES | NO DATA AVAILABLE |

OTHER SAFETY INFORMATION

| | |
|-------------------------|--------------------|
| RELATIVE VAPOUR DENSITY | 1.52 - (AIR = 1.0) |
|-------------------------|--------------------|

SECTION 10. STABILITY AND REACTIVITY

| | |
|------------|-------------------|
| REACTIVITY | NO DATA AVAILABLE |
|------------|-------------------|

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|---|--|
| CHEMICAL STABILITY | AVOID EXPOSURE TO AIR ANY LONGER THAN NECESSARY SO AS TO PREVENT PEROXIDE FORMATION. STABLE UNDER RECOMMENDED STORAGE CONDITIONS. TEST FOR PEROXIDE FORMATION BEFORE DISTILLATION OR EVAPORATION. TEST FOR PEROXIDE FORMATION OR DISCARD AFTER 1 YEAR. STABLE UNDER RECOMMENDED STORAGE CONDITIONS |
| POSSIBILITY OF HAZARDOUS REACTIONS | VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR. VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR |
| CONDITIONS TO AVOID | HEAT, FLAMES AND SPARKS. |
| INCOMPATIBLE MATERIALS | OXIDIZING AGENTS, REDUCING AGENTS, ACIDS, NITRIC ACID, PEROXIDES, BASES, SODIUM HYDROXIDE, AMINES, AMMONIA, OXYGEN, WARNING: ACETALDEHYDE IS OXIDIZED RAPIDLY AND EXOTHERMICALLY BY AIR, TO ACETIC ACID, ACID ANHYDRIDES, ALCOHOLS, HALOGENS, KETONES, PHENOL, HYDROGEN SULFIDE GAS, HYDROGEN PEROXIDE |
| HAZARDOUS DECOMPOSITION PRODUCTS | HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5 |

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

| | |
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| ACUTE TOXICITY | LOWEST OBSERVED EFFECT LEVEL ORAL - RAT - 675 MG/KG LD50 DERMAL - RABBIT - 3,540 MG/KG NO DATA AVAILABLE |
| SKIN CORROSION/IRRITATION | SKIN RABBIT RESULT: MILD SKIN IRRITATION (OECD TEST GUIDELINE 404) |
| SERIOUS EYE DAMAGE/EYE IRRITATION | NO DATA AVAILABLE |

| | |
|---|--|
| RESPIRATORY OR SKIN SENSITISATION | MAXIMISATION TEST - GUINEA PIG DID NOT CAUSE SENSITISATION ON LABORATORY ANIMALS. (OECD TEST GUIDELINE 406) |
| GERM CELL MUTAGENICITY | NO DATA AVAILABLE |
| CARCINOGENICITY IARC: NTP: OSHA: | SUSPECTED HUMAN CARCINOGENS 2B - GROUP 2B: POSSIBLY CARCINOGENIC TO HUMANS (ACETALDEHYDE) RAHC - REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN (ACETALDEHYDE) NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA. |
| REPRODUCTIVE TOXICITY | NO DATA AVAILABLE |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | MAY CAUSE RESPIRATORY IRRITATION. |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE | NO DATA AVAILABLE |
| ASPIRATION HAZARD | NO DATA AVAILABLE |
| ADDITIONAL INFORMATION | RTECS: AB1925000 BLURRED VISION, UNCONSCIOUSNESS, HEADACHE, VOMITING, NAUSEA, PULMONARY EDEMA. EFFECTS MAY BE DELAYED., CONVULSIONS, SNEEZING, COUGH, SHORTNESS OF BREATH TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. LIVER - IRREGULARITIES - BASED ON HUMAN EVIDENCE |

SECTION 12. ECOLOGICAL INFORMATION

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|-------------------------------------|---|
| TOXICITY TOXICITY TO FISH | LC50 - PIMEPHALES PROMELAS (FATHEAD MINNOW) - 31 MG/L - 96 H |
|-------------------------------------|---|

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|---|--|
| TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES | MMOBILIZATION EC50 - DAPHNIA MAGNA (WATER FLEA) - 57.4 MG/L - 48 H (OECD TEST GUIDELINE 202) |
| TOXICITY TO ALGAE | GROWTH INHIBITION EC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (GREEN ALGAE) - > 100 MG/L - 24 H (OECD TEST GUIDELINE 201) |

PERSISTENCE AND DEGRADABILITY

| | |
|------------------|--|
| BIODEGRADABILITY | BIOTIC/AEROBIC - EXPOSURE TIME 14 D RESULT: 80 % - READILY BIODEGRADABLE. (OECD TEST GUIDELINE 301C) |
|------------------|--|

| | |
|---------------------------|-------------------|
| BIOACCUMULATIVE POTENTIAL | NO DATA AVAILABLE |
|---------------------------|-------------------|

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|------------------|-------------------|
| MOBILITY IN SOIL | NO DATA AVAILABLE |
|------------------|-------------------|

| | |
|------------------------------------|--|
| RESULTS OF PBT AND VPVB ASSESSMENT | PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED |
|------------------------------------|--|

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|-----------------------|---|
| OTHER ADVERSE EFFECTS | HARMFUL TO AQUATIC LIFE. AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL HANDLING OR DISPOSAL. |
|-----------------------|---|

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

| | |
|---------|--|
| PRODUCT | BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. |
|---------|--|

| | |
|------------------------|-------------------------------|
| CONTAMINATED PACKAGING | DISPOSE OF AS UNUSED PRODUCT. |
|------------------------|-------------------------------|

SECTION 14. TRANSPORT INFORMATION

| | |
|-----------------------|-----------------------------|
| DOT (US) | |
| PROPER SHIPPING NAME: | ACETALDEHYDE (Acetaldehyde) |
| UN NUMBER: | 1089 |

CLASS: 3
PACKING GROUP: I
REPORTABLE QUANTITY (RQ): 1000 LBS
POISON INHALATION HAZARD: NO

IMDG

PROPER SHIPPING NAME: ACETALDEHYDE (Acetaldehyde)
UN NUMBER: 1089
CLASS: 3
PACKING GROUP: I
EMS-NO: F-E, S-D

IATA

PROPER SHIPPING NAME: ACETALDEHYDE (Acetaldehyde)
UN NUMBER: 1089
CLASS: 3
PACKING GROUP: I
IATA PASSENGER: NOT PERMITTED FOR TRANSPORT

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

SARA 313 COMPONENTS THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

| | CAS-NO. | REVISION DATE |
|--------------|---------|---------------|
| Acetaldehyde | 75-07-0 | 07/01/2007 |

SARA 311/312 HAZARDS

FIRE HAZARD, ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--------------|---------|---------------|
| Acetaldehyde | 75-07-0 | 07/01/2007 |

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--------------|---------|---------------|
| Acetaldehyde | 75-07-0 | 07/01/2007 |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|--------------|---------|---------------|
| Acetaldehyde | 75-07-0 | 07/01/2007 |

CALIFORNIA PROP. 65 COMPONENTS

WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Acetaldehyde

CAS-NO.
75-07-0

REVISION DATE
09/28/2007

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

| | |
|---------------|--|
| AQUATIC ACUTE | ACUTE AQUATIC TOXICITY |
| CARC. | CARCINOGENICITY |
| EYE IRRIT. | EYE IRRITATION |
| FLAM. LIQ | FLAMMABLE LIQUIDS |
| H224 | EXTREMELY FLAMMABLE LIQUID AND VAPOUR |
| H319 | CAUSES SERIOUS EYE IRRITATION |
| H335 | MAY CAUSE RESPIRATORY IRRITATION |
| H351 | SUSPECTED OF CAUSING CANCER |
| H402 | HARMFUL TO AQUATIC LIFE |
| STOT SE | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE |

HMIS RATING

| | |
|------------------------|---|
| HEALTH HAZARD: | 2 |
| CHRONIC HEALTH HAZARD: | * |
| FLAMMABILITY: | 4 |
| PHYSICAL HAZARD | 2 |

NFPA RATING

| | |
|--------------------|---|
| HEALTH HAZARD: | 2 |
| FIRE HAZARD: | 4 |
| REACTIVITY HAZARD: | 2 |

MSDS LEGEND

| | |
|--------|--|
| MW: | MOLECULAR WEIGHT |
| MF: | MOLECULAR FORMULA |
| VOC: | VOLATILE ORGANIC COMPOUNDS |
| ACGIH: | AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS |
| CAS: | CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER |
| OSHA: | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| PEL: | PERMISSIBLE EXPOSURE LIMIT (OSHA) |
| TLV: | THRESHOLD LIMIT VALUE (ACGIH) |

IMPORTANT:

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