

MATERIAL SAFETY DATA SHEET: BACTICIDE 45

Section I - General Information

(000000-000000- - 255C)

Date of Issue:

6/12/2007 12:00:00 AM

Chemical Name & Synonyms:

N/A

Chemical Family:

GLUTARALDEHYDE AQUEOUS SOLUTION

Manufacturer Name:

CHEM-AQUA, INC

Manufacturer Address:

BOX 152170
IRVING, TEXAS 75015

Prepared By:

M MCDOWELL/CHEMIST

Supersedes:

6/12/2007 12:00:00 AM

Trade Name & Synonyms:

BACTICIDE 45

Formula is a mixture: [v]

Product Code Number:

0684

Emergency Phone Number:

800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
GLUTARALDEHYDE \$ CEILING LIMIT	CORROSIVE	N/E 1	N/E 2	.05 PPM\$ 1	111-30-8

Section III - Physical Data

Boiling Point (*F):213°F
Vapor Pressure (mm Hg):0.20
Vapor Density (Air=1):1.0
pH @ 100% :3.1
% Volatile by Volume:100
H₂O Solubility:COMPLETE

Specific Gravity (H₂O=1):1.12
Color:COLORLESS
Odor:PUNGENT
Clarity:TRANSPARENT
Evaporation Rate (BuAc=1):1.0
Viscosity:NON-VISCOUS

Section IV - Fire and Explosion Hazard

Flash Point: >200°F

Flammable Limits: N/A

LEL: N/A

Method Used: T.C.C

UEL: N/A

Aerosol Level (NFPA 30B): N/A

Extinguishing Media:

[v] Foam [v] Alcohol Foam [v] CO2
[v] Dry Chemical [v] Water Spray [] Other

NFPA 704 Hazard Rating:

4-Extreme Health: 3
3-High Flammability: 1
2-Moderate Instability: 0
1-Slight Special:
0-Insignificant

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

THE USE OF WATER SPRAY (FOG) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

Section V - Health and Hazard Data

Threshold Limit Value:

0.05 PPM AS CEILING LIMIT FOR GLUTARALDEHYDE 1.

Effects of Overexposure:

Acute: (Short Term Exposure)

EYE CONTACT: CORROSIVE. CAUSES REDNESS, SWELLING OF THE CONJUNCTIVA, BURNS, CORNEAL DAMAGE, AND POSSIBLE BLINDNESS. VAPOR CAUSES IRRITATION SEEN AS REDNESS, STINGING, EXCESS TEAR PRODUCTION, AND SLIGHT EXCESS REDNESS TO THE CONJUNCTIVA.
SKIN CONTACT: CAUSES SEVERE IRRITATION SEEN AS REDNESS, ITCHING, AND A BURNING SENSATION. MAY CAUSE ALLERGIC SKIN REACTION SEEN AS DELAYED SKIN RASH WHICH MAY BE FOLLOWED BY BLISTERING, SCALING, AND OTHER SKIN EFFECTS. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS.
INHALATION: CAUSES BURNS TO THE RESPIRATORY TRACT, NOSE, MOUTH, AND THROAT WITH DISCOMFORT, NASAL DISCHARGE, SNEEZING, COUGHING, RAPID HEARTBEAT, AND CHEST PAIN. INHALATION OF MIST OR VAPORS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.
INGESTION: CORROSIVE. CAUSES BURNS TO THE MOUTH, THROAT, ESOPHAGUS, AND STOMACH WITH NAUSEA AND PAIN. SYMPTOMS MAY INCLUDE VOMITING OF BLOOD. BLOOD LOSS THROUGH DAMAGED TISSUE CAN LEAD TO LOW BLOOD PRESSURE AND SHOCK, AND MAY BE FATAL.

Chronic: (Long Term Exposure)

MAY CAUSE SKIN SENSITIZATION IN SOME INDIVIDUALS. VAPOR OR MIST MAY CAUSE RESPIRATORY SENSITIZATION IN SOME INDIVIDUALS.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.
TARGET ORGANS: LIVER, LUNGS, AND BLOOD FORMING ORGANS. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry

[v] Inhalation [] Ingestion [v] Absorption

Emergency First Aid Procedures:

Inhalation:

MOVE PERSON TO FRESH AIR. IF PERSON IS NOT BREATHING, CALL 911 OR AN AMBULANCE, AND THEN GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH IF POSSIBLE. CALL A POISON CONTROL CENTER OR A DOCTOR FOR FURTHER TREATMENT ADVICE.

Eye Contact:

WASH IMMEDIATELY AND CONTINUOUSLY WITH FLOWING WATER FOR AT LEAST 30 MINUTES. REMOVE CONTACT LENSES AFTER THE FIRST 5 MINUTES AND CONTINUE WASHING. OBTAIN PROMPT MEDICAL CONSULTATION, PREFERABLY FROM AN OPHTHALMOLOGIST. CALL A POISON CONTROL CENTER OR A DOCTOR IMMEDIATELY FOR TREATMENT ADVICE.

Skin Contact:

TAKE OFF CONTAMINATED CLOTHING. RINSE SKIN IMMEDIATELY WITH PLENTY OF WATER FOR 15-20 MINUTES. CALL A POISON CONTROL CENTER OR A DOCTOR FOR TREATMENT ADVICE.

Ingestion:

CALL A POISON CONTROL CENTER OR A DOCTOR IMMEDIATELY FOR TREATMENT ADVICE. DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING TO DRINK.

Notes to Physician:

PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. MEASURES AGAINST CIRCULATORY SHOCK, RESPIRATORY DEPRESSION, AND CONVULSIONS MAY BE NEEDED.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC NTP OSHA ACGIH Other

VOC CONTENT: 45.5% BY WEIGHT, 40% BY VOLUME, 509.0 G/L

PRODUCT MIXTURE

ORL-RAT LD₅₀: 320 MG/KG 3.

IHL-RAT LC₅₀: >220 PPM 3.

SKN-RBT LD₅₀: >2000 MG/KG 3.

GLUTARALDEHYDE

ORL-RAT LD₅₀: 134 MG/KG 4.

IHL-RAT LC₅₀: 0.29-0.39 MG/L/4H 4.

SKN-RBT LD₅₀: 2560 MG/KG 4.

SKN-HMN SDT: 6 MG/3D (INTERMITTENT) SEVERE 4.

SKN-RBT SDT: 2 MG/24H SEVERE 4.

EYE-RBT SDT: 1 MG SEVERE 4.

STUDIES IN HUMANS HAVE SHOWN THAT GLUTARALDEHYDE IS NEITHER PHOTOTOXIC NOR A PHOTOSENSITIZER. SUBCHRONIC DRINKING WATER STUDIES IN RATS, MICE AND DOGS USING CONCENTRATIONS UP TO 1000 PPM SHOWED NO EVIDENCE FOR ANY TARGET ORGAN TOXICITY. IN VITRO STUDIES FOR GENOTOXICITY USING A VARIETY OF ASSAYS HAVE GIVEN RESULTS VARYING FROM NO ACTIVITY, THOUGH EQUIVOCAL, TO WEAKLY POSITIVE; HOWEVER, ALL IN VIVO STUDIES FOR GENOTOXICITY HAVE BEEN UNIFORMLY NEGATIVE. SEVERAL DEVELOPMENTAL TOXICITY STUDIES HAVE DEMONSTRATED THAT AT MATERNALLY NONTOXIC DOSES, GLUTARALDEHYDE DOES NOT PRODUCE FETOTOXIC, EMBRYOTOXIC OR TERATOGENIC EFFECTS. IN A CHRONIC (2 YEAR) CONTINUOUS DRINKING WATER COMBINED CHRONIC TOXICITY-ONCOGENICITY STUDY USING FISCHER 344 RATS, THERE WAS NO EVIDENCE FOR NON-ONCOGENIC TARGET ORGAN TOXICITY. THE ONLY POSSIBLE ONCOGENICITY-RELATED FINDING WAS AN INCREASE IN THE INCIDENCE OF LARGE GRANULAR CELL LYMPHOCTIC LEUKEMIA IN FEMALE, BUT NOT MALE, RATS. THE PATTERN OF THE RESPONSE SUGGESTS THAT IT DOES NOT REPRESENT DIRECT CHEMICAL CARCINOGENIC ACTIVITY BUT, RATHER, A MODIFYING INFLUENCE ON THE EXPRESSION OF THIS SPONTANEOUS AND COMMONLY OCCURRING NEOPLASM IN THE FISCHER 344 RATS. REPEATED APPLICATIONS OF AQUEOUS SOLUTIONS OF GLUTARALDEHYDE TO THE RAT SKIN FOR 20 DOSAGES OVER A 28-DAY PERIOD AT 50, 100 OR 150 MG/KG/DAY PRODUCED MILD LOCAL INFLAMMATORY EFFECTS, BUT NO EVIDENCE FOR TARGET ORGANS OR TISSUE SYSTEMIC TOXICITY. 3.

OVEREXPOSURES HAVE BEEN KNOWN TO PRODUCE LIVER DAMAGE IN ANIMAL STUDIES. FETOTOXICITY OR EMBRYOTOXICITY IN THE PRESENCE OF MATERNAL TOXICITY HAS SHOWN TO OCCUR IN RABBITS AT A HIGH DOSE OF 45 MG/KG 3.

Section VII - Reactivity Data

Stability

Stable Unstable

Conditions to Avoid:

AVOID HEAT, HOT SURFACES, SPARKS, AND OPEN FLAMES.

Hazardous Polymerization

Will not occur May occur

Conditions to Avoid:

N/A

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE. AMINES, AMMONIA, AND STRONG ACIDS AND BASES.

Hazardous Decomposition Products:

OXIDES OF CARBON.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:

WEAR APPROPRIATE PROTECTIVE CLOTHING. USE CARE AS SPILLS MAY BE SLIPPERY. SHUT OFF SOURCE OF LEAK. DIKE AND CONTAIN SPILL. ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:

N/A

Section IX - Special Protection Information

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS. RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:

BUTYL OR NITRILE RUBBER GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:

CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

Section X - Storage and Handling Information

Storage Temperature		Storage Conditions			
Max: 100°F	Min: 25°F	<input checked="" type="checkbox"/> Indoors	<input type="checkbox"/> Outdoors	<input type="checkbox"/> Heated	<input type="checkbox"/> Refrigerated

Precautions to be Taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PLASTIC CONTAINER MAY CAUSE STATIC IGNITION HAZARD. DO NOT HANDLE OR EMPTY CONTAINERS IN THE PRESENCE OF IGNITION SOURCES.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

Section XI - Regulatory Information

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Upper % Limit</u>
None.		

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2006.
 2. OSHA PEL.
 3. VENDOR'S MSDS.
 4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINPOweb, 2007.
 5. EUROPEAN CHEMICAL SUBSTANCES INFORMATION SYSTEM (ESIS) INTERNATIONAL UNIFORM CHEMICAL INFORMATION DATABASE (IUCLID) CHEMICAL DATA SHEETS.
- ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR: IRRITANT, OSHA: OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, IARC: INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, TOX: TOXIC, NFPA: NATIONAL FIRE PROTECTION ASSOCIATION, PPM: PARTS PER MILLION, UEL: UPPER EXPLOSION LIMIT, STEL: SHORT-TERM EXPOSURE LIMIT, SKN: SKIN, IHL: INHALATION, COMB: COMBUSTIBLE, CORR: CORROSIVE, MUT: MUTAGENIC, CARC: CARCINOGENIC, N/A: NOT APPLICABLE, TLV: THRESHOLD LIMIT VALUE, N/E: NOT ESTABLISHED, ORL: ORAL, FLAM: FLAMMABLE, ASPHYX: ASPHYXANT, COC: CLEVELAND OPEN CUP, PNOR: PARTICLES NOT OTHERWISE REGULATED, LEL: LOWER EXPLOSION LIMIT, PNO: PARTICLES NOT OTHERWISE SPECIFIED, FMCC: PENSKY-MARTIN CLOSED CUP, NTP: NATIONAL TOXICOLOGY PROGRAM, TCC: TAGLIABUE CLOSED CUP, SEV: SEVERE, RBT: RABBIT, INV: INTRAVENOUS, ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, PEL: PERMISSIBLE EXPOSURE LIMIT, MOD: MODERATE, IPT: INTRAPERITONEAL, GM/KG: GRAMS PER KILOGRAM, C.C.C.: CLEVELAND CLOSED CUP, HMN: HUMAN, MG/M3: MILLIGRAMS PER CUBIC METER, MG/KG: MILLIGRAMS PER KILOGRAM, VOC: VOLATILE ORGANIC COMPOUND, SDT: STANDARD DRAIZE TEST, MSE: MOUSE, GPG: GUINEA PIG.

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