

Chem-Impex International Inc.

Tel: (630) 766-2112

E-mail: sales@chemimpex.com

Shipping and Correspondence:

935 Dillon Drive

Wood Dale, IL 60191 USA

Fax: (630) 766-2218

Web site: www.chemimpex.com

Manufacturing site:

825 Dillon Drive

Wood Dale, IL 60191 USA

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	51123
NAME:	Acetic acid, glacial
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 3), H226

SKIN CORROSION (CATEGORY 1A), H314

SERIOUS EYE DAMAGE (CATEGORY 1), H318

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)

H226 FLAMMABLE LIQUID AND VAPOUR.

H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

PRECAUTIONARY STATEMENT(S)

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.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P301 + P330 + P331	IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.
P303 + P361 + P353	IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
P304 + P340 + P310	IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/ PHYSICIAN.
P305 + P351 + P338 + P310	F IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P363	WASH CONTAMINATED CLOTHING BEFORE REUSE.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.
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**

NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	C ₂ H ₄ O ₂
MW:	60.05
CAS-NO.	64-19-7
PURITY:	-

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
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ACETIC ACID, GLACIAL		
	FLAM. LIQ. 3; SKIN CORR. 1A; EYE DAM. 1; H226, H314, H318 CONCENTRATION LIMITS: >= 90 %: SKIN CORR. 1A, H314; 25 - < 90 %: SKIN CORR. 1B, H314; 10 - < 25 %: SKIN IRRIT. 2, H315; 10 - < 25 %: EYE IRRIT. 2, H319;	<= 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	FIRST AIDERS NEED TO PROTECT THEMSELVES. SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
IF INHALED	AFTER INHALATION: FRESH AIR. CALL IN PHYSICIAN.
IN CASE OF SKIN CONTACT	IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CALL A PHYSICIAN IMMEDIATELY.
IN CASE OF EYE CONTACT	AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. IMMEDIATELY CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.
IF SWALLOWED	AFTER SWALLOWING: MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST), AVOID VOMITING (RISK OF PERFORATION). CALL A PHYSICIAN IMMEDIATELY. DO NOT ATTEMPT TO NEUTRALISE.
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

SUITABLE EXTINGUISHING MEDIA
WATER FOAM CARBON DIOXIDE (CO₂) DRY POWDER

UNSUITABLE EXTINGUISHING MEDIA
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF
EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES
COMBUSTIBLE.
VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD
ALONG FLOORS.
FORMS EXPLOSIVE MIXTURES WITH AIR AT ELEVATED
TEMPERATURES.
DEVELOPMENT OF HAZARDOUS COMBUSTION GASES
OR VAPOURS POSSIBLE IN THE EVENT OF FIRE.

ADVICE FOR FIREFIGHTERS

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED
BREATHING APPARATUS. PREVENT SKIN CONTACT BY
KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE
PROTECTIVE CLOTHING.

FURTHER INFORMATION

REMOVE CONTAINER FROM DANGER ZONE AND COOL
WITH WATER. PREVENT FIRE EXTINGUISHING WATER
FROM CONTAMINATING SURFACE WATER OR THE
GROUND WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

ADVICE FOR NON-EMERGENCY PERSONNEL: DO NOT
BREATHE VAPORS, AEROSOLS. AVOID SUBSTANCE
CONTACT. ENSURE ADEQUATE VENTILATION. KEEP
AWAY FROM HEAT AND SOURCES OF IGNITION.
EVACUATE THE DANGER AREA, OBSERVE EMERGENCY
PROCEDURES, CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS. RISK OF
EXPLOSION.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS.
OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE
SECTIONS 7 AND 10). DISPOSE OF PROPERLY. CLEAN UP
AFFECTED AREA.

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE AFTER WORKING WITH SUBSTANCE. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.
STORAGE CLASS (TRGS 510): 3: FLAMMABLE LIQUIDS.

STORE AT RT

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
ACETIC ACID	64-19-7	TWA	10 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		STEL	15 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		TWA	10 PPM 25 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		ST	15 PPM 37 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		TWA	10 PPM 25 MG/M3	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		PEL	10 PPM 25 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS
		C	40 PPM	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS
		STEL	15 PPM 37 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS	IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE AFTER WORKING WITH SUBSTANCE.
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PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). TIGHTLY FITTING SAFETY GOGGLES
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SKIN PROTECTION	THIS RECOMMENDATION APPLIES ONLY TO THE PRODUCT STATED IN THE SAFETY DATA SHEET, SUPPLIED BY US AND FOR THE DESIGNATED USE. WHEN DISSOLVING IN OR MIXING WITH OTHER SUBSTANCES AND UNDER CONDITIONS DEVIATING FROM THOSE STATED IN EN 16523-1 PLEASE CONTACT THE SUPPLIER OF CE-APPROVED GLOVES.
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FULL CONTACT
MATERIAL: BUTYL-RUBBER
MINIMUM LAYER THICKNESS: 0.7 MM
BREAK THROUGH TIME: 480 MIN
MATERIAL TESTED:BUTOJECT® (KCL 898)

THIS RECOMMENDATION APPLIES ONLY TO THE
PRODUCT STATED IN THE SAFETY DATA SHEET,
SUPPLIED BY US AND FOR THE DESIGNATED USE. WHEN
DISSOLVING IN OR MIXING WITH OTHER SUBSTANCES
AND UNDER CONDITIONS DEVIATING FROM THOSE
STATED IN EN 16523-1 PLEASE CONTACT THE SUPPLIER
OF CE-APPROVED GLOVES (E.G. KCL GMBH).

SPLASH CONTACT
MATERIAL: LATEX GLOVES
MINIMUM LAYER THICKNESS: 0.6 MM
BREAK THROUGH TIME: 30 MIN
MATERIAL TESTED:LAPREN® (KCL 706 SIZE M)

BODY PROTECTION	FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING.
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**RESPIRATORY
PROTECTION**

RECOMMENDED FILTER TYPE: FILTER E-(P2)
THE ENTREPRENEUR HAS TO ENSURE THAT
MAINTENANCE, CLEANING AND TESTING OF
RESPIRATORY PROTECTIVE DEVICES ARE CARRIED OUT
ACCORDING TO THE INSTRUCTIONS OF THE PRODUCER.
THESE MEASURES HAVE TO BE PROPERLY
DOCUMENTED.

REQUIRED WHEN VAPOURS/AEROSOLS ARE
GENERATED. OUR RECOMMENDATIONS ON FILTERING
RESPIRATORY PROTECTION ARE BASED ON THE
FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND
OTHER ACCOMPANYING STANDARDS RELATING TO THE
USED RESPIRATORY PROTECTION SYSTEM.

**CONTROL OF
ENVIRONMENTAL
EXPOSURE**

DO NOT LET PRODUCT ENTER DRAINS. RISK OF
EXPLOSION.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	LIQUID WITH A SHARP ODOR
ODOUR	STINGING
ODOUR THRESHOLD	0.2 PPM
PH	2.5 AT 50 G/L AT 20 °C
MELTING	16.2 °C (61.2 °F) – LIT.
POINT/FREEZING POINT	
INITIAL BOILING POINT	117 - 118 °C - LIT.
AND BOILING RANGE	
FLASH POINT	39 °C (102 °F) - CLOSED CUP - CLOSED CUP
EVAPOURATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER	UPPER EXPLOSION LIMIT: 19.9 %(V)
FLAMMABILITY OR	LOWER EXPLOSION LIMIT: 4 %(V)
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	20.79 HPA AT 25 °C
VAPOUR DENSITY	2.07
RELATIVE DENSITY	1.049 G/CM3 AT 25 °C (77 °F) - LIT.
WATER SOLUBILITY	602.9 G/L AT 25 °C AT 1,013 HPA - COMPLETELY SOLUBLE
PARTITION	LOG POW: -0.17 AT 25 °C - BIOACCUMULATION IS NOT
COEFFICIENT: N- OCTANOL/WATER	EXPECTED. (ECHA)
AUTO-IGNITION	463 °C
TEMPERATURE	
DECOMPOSITION	DISTILLABLE IN AN UNDECOMPOSED STATE AT
TEMPERATURE	NORMAL PRESSURE.
VISCOSITY	1.17 MM2/S AT 20 °C
EXPLOSIVE	NOT CLASSIFIED AS EXPLOSIVE.
PROPERTIES	
OXIDIZING PROPERTIES	NONE

OTHER SAFETY INFORMATION

SURFACE TENSION	28.8 MN/M AT 10.0 °C
RELATIVE VAPOR	2.07
DENSITY	

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	VAPOR/AIR-MIXTURES ARE EXPLOSIVE AT INTENSE WARMING.
CHEMICAL STABILITY	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	RISK OF EXPLOSION WITH: PEROXI COMPOUNDS PERCHLORIC ACID FUMING SULFURIC ACID PHOSPHORUS HALIDES HYDROGEN PEROXIDE CHROMIUM(VI) OXIDE POTASSIUM PERMANGANATE PEROXIDES STRONG OXIDIZING AGENTS RISK OF IGNITION OR FORMATION OF INFLAMMABLE GASES OR VAPOURS WITH: IRON ZINC MAGNESIUM MILD STEEL POSSIBLE FORMATION OF: HYDROGEN VIOLENT REACTIONS POSSIBLE WITH: STRONG ALKALIS ALDEHYDES ALKALI HYDROXIDES NONMETALLIC HALIDES ETHANOLAMINE ACETALDEHYDE ALCOHOLS HALOGEN-HALOGEN COMPOUNDS CHLOROSULFONIC ACID CHROMOSULFURIC ACID POTASSIUM HYDROXIDE NITRIC ACID
CONDITIONS TO AVOID	HEATING.
INCOMPATIBLE MATERIALS	NO DATA AVAILABLE

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

LD50 ORAL - RAT - 3,310 MG/KG
REMARKS: (RTECS)

LC50 INHALATION - MOUSE - 4 H - 2,819 MG/L - VAPOR
REMARKS: (RTECS)

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

SKIN – RABBIT
RESULT: CAUSES BURNS. - 4 H
(OECD TEST GUIDELINE 404)
REMARKS: CLASSIFIED ACCORDING TO REGULATION
(EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)

**SERIOUS EYE
DAMAGE/EYE
IRRITATION**

EYES – RABBIT
RESULT: CAUSES BURNS. - 4 H
(OECD TEST GUIDELINE 405)
REMARKS: (IUCLID)
REMARKS: CAUSES SERIOUS EYE DAMAGE.

**RESPIRATORY OR SKIN
SENSITISATION**

NO DATA AVAILABLE

**GERM CELL
MUTAGENICITY**

TEST TYPE: AMES TEST
TEST SYSTEM: SALMONELLA TYPHIMURIUM
METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION
METHOD: OECD TEST GUIDELINE 471
RESULT: NEGATIVE
TEST TYPE: MUTAGENICITY (MAMMAL CELL TEST):
CHROMOSOME ABERRATION.
TEST SYSTEM: CHINESE HAMSTER OVARY CELLS
METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION
METHOD: OECD TEST GUIDELINE 473
RESULT: NEGATIVE

TEST TYPE: MICRONUCLEUS TEST
SPECIES: RAT
CELL TYPE: BONE MARROW
APPLICATION ROUTE: INHALATION (VAPOR)
METHOD: MUTAGENICITY (MICRONUCLEUS TEST)
RESULT: NEGATIVE

CARCINOGENICITY

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED
HUMAN CARCINOGEN BY IARC.
NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS A KNOWN OR ANTICIPATED
CARCINOGEN BY NTP.
OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON
OSHA'S LIST OF REGULATED CARCINOGENS.

**REPRODUCTIVE
TOXICITY**

NO DATA AVAILABLE

**SPECIFIC TARGET
ORGAN TOXICITY -
SINGLE EXPOSURE**

NO DATA AVAILABLE

**SPECIFIC TARGET
ORGAN TOXICITY -
REPEATED EXPOSURE**

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

**ADDITIONAL
INFORMATION**

RTECS: AF1225000

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN., SPASM, INFLAMMATION AND EDEMA OF THE LARYNX, SPASM, INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY EDEMA, BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, VOMITING, INGESTION OR INHALATION OF CONCENTRATED ACETIC ACID CAUSES DAMAGE TO TISSUES OF THE RESPIRATORY AND DIGESTIVE TRACTS. SYMPTOMS INCLUDE: HEMATEMESIS, BLOODY DIARRHEA, EDEMA AND/OR PERFORATION OF THE ESOPHAGUS AND PYLORUS, PANCREATITIS, HEMATURIA, ANURIA, UREMIA, ALBUMINURIA, HEMOLYSIS, CONVULSIONS, BRONCHITIS, PULMONARY EDEMA, PNEUMONIA, CARDIOVASCULAR COLLAPSE, SHOCK, AND DEATH. DIRECT CONTACT OR EXPOSURE TO HIGH CONCENTRATIONS OF VAPOR WITH SKIN OR EYES CAN CAUSE: ERYTHEMA, BLISTERS, TISSUE DESTRUCTION WITH SLOW HEALING, SKIN BLACKENING, HYPERKERATOSIS, FISSURES, CORNEAL EROSION, OPACIFICATION, IRITIS, CONJUNCTIVITIS, AND POSSIBLE BLINDNESS.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

STOMACH - IRREGULARITIES - BASED ON HUMAN EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

TOXICITY TO FISH

SEMI-STATIC TEST LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - > 1,000 MG/L - 96 H (OECD TEST GUIDELINE 203)

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES

STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - > 1,000 MG/L - 48 H (OECD TEST GUIDELINE 202)

TOXICITY TO ALGAE

STATIC TEST EC50 - SKELETONEMA COSTATUM - > 1,000 MG/L - 72 H (ISO 10253)

TOXICITY TO BACTERIA	EC5 - PSEUDOMONAS PUTIDA - 2,850 MG/L - 16 H REMARKS: NEUTRAL (MAXIMUM PERMISSIBLE TOXIC CONCENTRATION) (LIT.) MICROTOX TEST EC50 - PHOTOBACTERIUM PHOSPHOREUM - 11 MG/L – 15 MIN REMARKS: (IUCLID)
PERSISTENCE AND DEGRADABILITY	
BIODEGRADABILITY	RESULT: 99 % - READILY BIODEGRADABLE. (OECD TEST GUIDELINE 301D) REMARKS: (HSDB) RESULT: 95 % - READILY ELIMINATED FROM WATER (OECD TEST GUIDELINE 302B)
BIOCHEMICAL OXYGEN DEMAND (BOD)	880 MG/G
RATIO BOD/THBOD	REMARKS: (LIT.) 76 % REMARKS: (IUCLID)
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
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.
OTHER ADVERSE EFFECTS	BIOLOGICAL EFFECTS: HARMFUL EFFECT DUE TO PH SHIFT. CAUSTIC EVEN IN DILUTED FORM. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO MIXING WITH OTHER WASTE.

CONTAMINATED PACKAGING DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
PROPER SHIPPING NAME: ACETIC ACID, GLACIAL
UN NUMBER: 2789
CLASS: 8 (3)
PACKING GROUP: II
REPORTABLE QUANTITY (RQ): 5000 LBS
POISON INHALATION HAZARD: NO

IMDG
PROPER SHIPPING NAME: ACETIC ACID, GLACIAL
UN NUMBER: 2789
CLASS: 8 (3)
PACKING GROUP: II
EMS-NO: F-E, S-C

IATA
PROPER SHIPPING NAME: ACETIC ACID, GLACIAL
UN NUMBER: 2789
CLASS: 8 (3)
PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY

COMPONENTS	CAS-NO.	COMPONENT RQ (LBS)	CALCULATED PRODUCT RQ (LBS)
ACETIC ACID	64-19-7	5000	5000

SARA 304 EXTREMELY HAZARDOUS SUBSTANCES REPORTABLE QUANTITY
THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 304 EHS RQ.

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES THRESHOLD PLANNING QUANTITY
THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

SARA 311/312 HAZARDS

FIRE HAZARD
ACUTE HEALTH HAZARD
CHRONIC HEALTH HAZARD

SARA 313

THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

CLEAN AIR ACT

THIS PRODUCT NEITHER CONTAINS, NOR WAS MANUFACTURED WITH A CLASS I OR CLASS II ODS AS DEFINED BY THE U.S. CLEAN AIR ACT SECTION 602 (40 CFR 82, SUBPT. A, APP. A + B).

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS AIR POLLUTANTS (HAP), AS DEFINED BY THE U.S. CLEAN AIR ACT SECTION 112 (40 CFR 61).

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS LISTED UNDER THE U.S. CLEAN AIR ACT SECTION 112(R) FOR ACCIDENTAL RELEASE PREVENTION (40 CFR 68.130, SUBPART F). THE FOLLOWING CHEMICAL(S) ARE LISTED UNDER THE U.S. CLEAN AIR ACT SECTION 111 SOCM I INTERMEDIATE OR FINAL VOC'S (40 CFR 60.489):

ACETIC ACID	64-19-7	>= 90 - <= 100 %
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CLEAN WATER ACT

THE FOLLOWING HAZARDOUS SUBSTANCES ARE LISTED UNDER THE U.S. CLEANWATER ACT, SECTION 311, TABLE 116.4A:

ACETIC ACID	64-19-7	>= 90 - <= 100 %
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THE FOLLOWING HAZARDOUS CHEMICALS ARE LISTED UNDER THE U.S. CLEANWATER ACT, SECTION 311, TABLE 117.3:

ACETIC ACID	64-19-7	>= 90 - <= 100 %
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THIS PRODUCT DOES NOT CONTAIN ANY TOXIC POLLUTANTS LISTED UNDER THE U.S. CLEAN WATER ACT SECTION 307

THIS PRODUCT DOES NOT CONTAIN ANY PRIORITY POLLUTANTS RELATED TO THE U.S. CLEAN WATER ACT

US STATE REGULATIONS**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

ACETIC ACID	64-19-7
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PENNSYLVANIA RIGHT TO KNOW COMPONENTS

ACETIC ACID	64-19-7
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MAINE CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

VERMONT CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

WASHINGTON CHEMICALS OF HIGH CONCERN

PRODUCT DOES NOT CONTAIN ANY LISTED CHEMICALS

THE INGREDIENTS OF THIS PRODUCT ARE REPORTED IN THE FOLLOWING INVENTORIES:

TSCA	ALL SUBSTANCES LISTED AS ACTIVE ON THE TSCA INVENTORY
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TSCA LIST

NO SUBSTANCES ARE SUBJECT TO A SIGNIFICANT NEW USE RULE.
NO SUBSTANCES ARE SUBJECT TO TSCA 12(B) EXPORT NOTIFICATION REQUIREMENTS.

SECTION 16. OTHER INFORMATION

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

H226	FLAMMABLE LIQUID AND VAPOUR.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
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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