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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	33990
NAME:	Citronellyl acetate
SYNONYMS:	3,7-Dimethyloct-6-en-1-yl acetate
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)
SKIN CORROSION/IRRITATION (CATEGORY 2)
AQUATIC HAZARD (ACUTE) (CATEGORY 2)
AQUATIC HAZARD (LONG-TERM) (CATEGORY 2)

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

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



SIGNAL WORD WARNING

HAZARD STATEMENT(S)

H315 CAUSES SKIN IRRITATION
H401 TOXIC TO AQUATIC LIFE
H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

PRECAUTIONARY STATEMENT(S)

P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE
 PROTECTION.
P302+P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
P332+ P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE OR
 ATTENTION.
P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/
 ATTENTION.
P362+364 TAKE OFF CONTAMINATED CLOTHING AND WASH IT
 BEFORE REUSE.
P391 COLLECT SPILLAGE.
P420 STORE AWAY FROM OTHER MATERIALS.
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: C₁₂H₂₂O₂
MW: 198.3
CAS-NO. 150-84-5
PURITY: ≥ 97% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Citronellyl acetate		

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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	NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN. DO NOT INDUCE VOMITING. IF VOMITING OCCURS, THE HEAD SHOULD BE KEPT LOW SO THAT STOMACH VOMIT DOESN" T ENTER THE LUNGS.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	SKIN IRRITATION. MAY CAUSE REDNESS AND PAIN 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 SPRAY, FOG, CO2, DRY CHEMICAL, OR ALCOHOL RESISTANT FOAM. UNSUITABLE EXTINGUISHING MEDIA: DO NOT USE A SOLID WATER STREAM AS IT MAY SCATTER AND SPREAD FIRE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	FIRE MAY PRODUCE IRRITATING, CORROSIVE AND/OR TOXIC GASES.
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY. MOVE CONTAINERS FROM FIRE AREA IF YOU CAN DO SO WITHOUT RISK. WATER RUNOFF CAN CAUSE ENVIRONMENTAL DAMAGE. VENTILATE CLOSED SPACES BEFORE ENTERING THEM. KEEP RUN-OFF WATER OUT OF SEWERS AND WATER SOURCES. DIKE FOR WATER CONTROL.
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS .STATIC CHARGES GENERATED BY EMPTYING PACKAGE IN OR NEAR FLAMMABLE VAPOR MAY CAUSE FLASH FIRE.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. AVOID BREATHING DUST. 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	PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
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 FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES	KEEP CONTAINER CLOSED. HANDLE CONTAINERS WITH CARE. OPEN SLOWLY IN ORDER TO CONTROL POSSIBLE PRESSURE RELEASE. STORE IN A COOL, WELL-VENTILATED AREA. 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	CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.
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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.
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PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
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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.
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 RESPIRATOR WITH MULTI- PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) 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	Clear, colorless liquid
ODOUR	CHARACTERISTIC.
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	228 - 230 °C (Lit.)
FLASH POINT	> 93 °C
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE

VAPOUR PRESSURE	0.05 MM HG AT 20 C 20 MBAR AT 121 C
VAPOUR DENSITY	6.9
RELATIVE DENSITY	0.89 (Lit.)
WATER SOLUBILITY	INSOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NOT EXPLOSIVE
OXIDIZING PROPERTIES	NOT OXIDIZING

OTHER SAFETY INFORMATION

SPECIFIC GRAVITY	0.89 AT 25 C
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SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	THE PRODUCT IS STABLE AND NON-REACTIVE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DANGEROUS REACTION KNOWN UNDER CONDITIONS OF NORMAL USE.
CONDITIONS TO AVOID	AVOID TEMPERATURES EXCEEDING THE FLASH POINT. CONTACT WITH INCOMPATIBLE MATERIALS.
INCOMPATIBLE MATERIALS	STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS	NO HAZARDOUS DECOMPOSITION PRODUCTS IF STORED AND HANDLED AS INDICATED. IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY	NO DATA AVAILABLE
	INHALATION: NO DATA AVAILABLE
	DERMAL: NO DATA AVAILABLE
	NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	CAUSES SKIN IRRITATION. RABBIT, PRIMARY SKIN IRRITATION - IRRITATING HUMAN MAXIMIZATION TEST - NOT A SENSITIZER SPECIES: RABBIT RESULT: IRRITANT.
SERIOUS EYE DAMAGE/EYE IRRITATION	DIRECT CONTACT WITH EYES MAY CAUSE TEMPORARY IRRITATION. RABBIT, EYE IRRITATION - NONIRRITATING SPECIES: RABBIT RESULT: NON-IRRITANT
RESPIRATORY OR SKIN SENSITISATION	OPEN EPICUTANEOUS TEST (OET) SPECIES: GUINEA PIG RESULT: NON-SENSITIZING.
GERM CELL MUTAGENICITY	NO DATA AVAILABLE
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 IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.
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: NOT AVAILABLE

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

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

TOXIC TO AQUATIC LIFE WITH LONG
LASTING EFFECTS.

HYDROLYSIS

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH4

HALF-LIFE: 4,101 H (20 C)

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH4

HALF-LIFE: 2,523 H (25 C)

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH7

HALF-LIFE: 8,191 H (20 C)

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH7

HALF-LIFE: 4,905 H (25 C)

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH9

HALF-LIFE: 337 H (20 C)

TEST METHOD: OECD GUIDELINE 111
(ABIOTIC)

PH9

HALF-LIFE: 185 H (25 C)

PRODUCT		SPECIES	RESULTS
Citronellyl acetate			
OTHER	EC20	MICRO-ORGANISMS	> 1000 MG/L, 30 MIN
AQUATIC			

FISH	LC50	ZEBRA DANIO (DANIO RERIO)	6.1 MG/L, 96 HOURS
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PERSISTENCE AND DEGRADABILITY

TEST METHOD: OECD 301B; ISO 9439; 92/69/EEC, C.4-C (AEROBIC), ACTIVATED SLUDGE
METHOD OF ANALYSIS: CO2 FORMATION RELATIVE TO THE THEORETICAL VALUE
DEGREE OF ELIMINATION: 80 - 90 % (28 D)
EVALUATION: READILY BIODEGRADABLE (ACCORDING TO OECD CRITERIA).

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

NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT

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: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.(Citronellyl acetate)

UN NUMBER: 3082

CLASS: 9
PACKING GROUP: III
REPORTABLE QUANTITY (RQ): 155
MARINE POLLUTANT YES

IMDG

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCES,
LIQUID, N.O.S.(Citronellyl acetate)
UN NUMBER: 3082
CLASS: 9
PACKING GROUP: III
MARINE POLLUTANT YES

IATA

PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCES,
LIQUID, N.O.S.(Citronellyl acetate)
UN NUMBER: 3082
CLASS: 9
PACKING GROUP: III
REPORTABLE QUANTITY (RQ): 155

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

SARA 311/312 HAZARDS SKIN CORROSION OR IRRITATION

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Citronellyl acetate	150-84-5	

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Citronellyl acetate	150-84-5	

NEW JERSEY RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Citronellyl acetate	150-84-5	

**CALIFORNIA PROP. 65
COMPONENTS**

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

SECTION 16. OTHER INFORMATION

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

H315	CAUSES SKIN IRRITATION
H319	CAUSES SERIOUS EYE IRRITATION.
H401	TOXIC TO AQUATIC LIFE
H411	TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

HMIS RATING

HEALTH HAZARD:	2
CHRONIC HEALTH HAZARD:	
FLAMMABILITY:	1
PHYSICAL HAZARD	0

NFPA RATING

HEALTH HAZARD:	2
FIRE HAZARD:	1
REACTIVITY HAZARD:	0

MSDS LEGEND

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

IMPORTANT:

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