

# Material Safety Data Sheet



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

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24-Hour Emergency Phone Number: 989-636-4400

Product: VERSENE\* 220 CRYSTALS CHELATING AGENT

Product Code: 90692

Effective Date: 03/09/04      Date Printed: 03/10/04      MSD: 000854

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Tetrasodium salt of ethylenediaminetetraacetic  
acid tetrahydrate      CAS# 013235-36-4      99.9%

The CAS Number for TSCA = 000064-02-8

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

\*\*\*\*\*  
\* White crystals. Odorless. Causes eye irritation. May be harmful      \*  
\* if swallowed. Isolate area.      \*  
\*\*\*\*\*

### POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause pain disproportionate to the level of irritation to eye tissues. May cause moderate eye irritation which may be slow to heal. May cause slight temporary corneal injury.

SKIN: Essentially non-irritating to skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

INHALATION: Vapors are unlikely due to physical properties. No adverse effects are anticipated from single exposure to dust.

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SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

CANCER INFORMATION: This mixture contains a very small amount of the trisodium salt of nitrilotriacetic acid (trisodium NTA, CAS=005064-31-3) which is listed as a potential carcinogen for hazard communication purposes under OSHA Standard CFR 1910.01200. Components listed by IARC and NTP: trisodium nitrilotriacetate. Although large dietary doses of NTA have caused urinary tumors in laboratory animals, there is little likelihood that NTA could cause cancer in humans, especially at subtoxic doses. The trisodium salt of EDTA did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus.

REPRODUCTIVE EFFECTS: Limited data in laboratory animals suggest that the material does not affect reproduction.

#### 4. FIRST AID

EYE: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Move person to fresh air; if effects occur, consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### 5. FIRE FIGHTING MEASURES

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FLAMMABLE PROPERTIES

FLASH POINT: Not applicable.

METHOD USED: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABILITY LIMITS

LFL: Not applicable.

UFL: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Fire conditions may cause this product to decompose. Refer to "Hazardous Decomposition Section".

OTHER FLAMMABILITY INFORMATION: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate.

EXTINGUISHING MEDIA: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. Processing this product may generate dusts. Dust explosion hazard may result from forceful application of fire extinguishing agents.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls/Personal Protection.

PROTECT THE ENVIRONMENT: Prevent from entering into soil,

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ditches, sewers, waterways and or groundwater. See Section 12, Ecological Information.

CLEANUP: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations for additional information.

## 7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes. Do not swallow. Wash thoroughly after handling. Good housekeeping and controlling of dusts are necessary for safe handling of product.

STORAGE: Store below 50C (120F). Do not store in: zinc, aluminum, carbon steel, copper, copper alloys, nickel.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

### PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use chemical glasses.

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed.

RESPIRATORY PROTECTION: In dusty or misty atmospheres, use an approved articulate respirator.

EXPOSURE GUIDELINES: None established.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White crystals.

ODOR: Odorless.

VAPOR PRESSURE: < 0.1 mmHg

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

SOLUBILITY IN WATER: 103g/100g @25C

SPECIFIC GRAVITY: Bulk density 45 lbs/cu ft.

## 10. STABILITY AND REACTIVITY

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CHEMICAL STABILITY: Stable under recommended storage conditions.  
See Storage, Section 7.

CONDITIONS TO AVOID: Exposure to elevated temperatures can cause  
product to decompose.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with:  
oxidizers. Flammable hydrogen may be generated from contact  
with metals such as aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products depend  
upon temperature, air supply and the presence of other  
materials. Decomposition products can include and are not  
limited to carbon monoxide, carbon dioxide, ammonia, nitrogen  
oxides.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health  
Effects. For detailed toxicological data, write or call the  
address or non-emergency number shown in Section 1)

SKIN: The dermal LD50 has not been determined.

INGESTION: The oral LD50 for rats is between 630-1260 mg/kg.

MUTAGENICITY: Most data indicate that EDTA and its salts are not  
mutagenic. Minimal effects reported are likely due to trace  
metal deficiencies resulting from chelation by EDTA.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call  
the address or non-emergency number shown in Section 1)

#### ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Based largely or completely on infor-  
mation for similar material(s): Bioconcentration potential  
is low (BCF less than 100 or Log Pow less than 3).

DEGRADATION & PERSISTENCE: Based largely or completely on in-  
formation for similar material(s): Based on stringent OECD  
test guidelines, this material cannot be considered as readily  
biodegradable; however, these results do not necessarily mean  
that the material is not biodegradable under environmental  
conditions.

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ECOTOXICITY: Based largely or completely on information for similar material(s): Material is practically non-toxic to aquatic organisms on an acute basis (LC50 or EC50 >100 mg/L in the most sensitive species tested).

### 13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device, waste water treatment system, landfill.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

### 14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): For D.O.T. regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

### 15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However,

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no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

#### U.S. REGULATIONS

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SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

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SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard

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#### TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

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The CAS Number for TSCA is 000064-02-8.

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STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey  
Pennsylvania

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#### OSHA HAZARD COMMUNICATION STANDARD:

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REGULATORY INFORMATION (CONTINUED)

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

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WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2A - possible, probable or known human carcinogen according to classifications by IARC or ACGIH  
Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

- - - - -  
CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

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HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT(%w/w)
TRISODIUM NITRILOTRIACETATE	005064-31-3	<0.2%

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CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. OTHER INFORMATION

MSDS STATUS: Revised Sections 3, 4, 5, 7, 8, 10, 12 and 15.

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The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult The Dow Chemical Company For Further Information.