

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: VERSENE 220 CRYSTALS CHELATING AGENT
MSDS#: DW90692
DATE ISSUED: 03/09/2004
SUPERCEDES: 02/06/1999
ISSUED BY: 008360

MSDS:

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24 HOUR Emergency Phone Number: 989-636-4400

Product: Versene* 220 Crystals Chelating Agent

Product Code: 90692

Effective Date: 03/09/04 **MSDS:** 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%

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 level of irritation to eye tissues. May cause moderate eye irritation which may be slow to heal. May cause slight temporary corneal damage.

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.

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 effect 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 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

FLAMMABLE PROPERTIES

FLASH POINT: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE: N/A

FLAMMABILITY LIMITS

LFL: N/A

UFL: N/A

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 info)

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

CLEAN UP: 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 or 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 particulate 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:

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 information 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 information 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.

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 EC.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 the applicable laws are the responsibility solely of the waste generator. THE DOW 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.

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending it 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.

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 presented herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyers responsibility to ensure that it's 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

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

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.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

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

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

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

the disclosure requirements of
NEW JERSEY
PENNSYLVANIA

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

CANADIAN REGULATIONS

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 and ACGIH.

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to 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.

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

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

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 on the list.

16. OTHER INFORMATION:

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

* or ® INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

-----Additional Information-----

CONTACT: MSDS Coordinator UNIVAR USA Inc.
During Business Hours, Pacific Time (425) 889-3400

-----NOTICE-----

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OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR

PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED
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AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR
*****CONSEQUENTIAL DAMAGES.*****

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a product specification sheet and or certificate of analysis. These can be obtained from your local sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical resources. While the information is believed to be accurate, UNIVAR makes no representations as to its accuracy or sufficiency. Conditions of use are beyond UNIVAR's control and therefore user's are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information related only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

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