

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 1/11
(30495803/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

VECTOR BIO-5

Recommended use of the chemical and restriction on use

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Registrant:
St. Louis, MO 63122
3568 Tree Court Industrial Blvd.
Whitmire Micro-Gen Research Laboratories, Inc.

Other means of identification

Chemical family: enzyme

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Resp. Sens.	1	Respiratory sensitization
Skin Sens.	1	Skin sensitization

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 2/11
(30495803/SDS_GEN_US/EN)

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P284	[In case of inadequate ventilation] wear respiratory protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P362 + P364	Take off contaminated clothing and wash before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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Hazards not otherwise classified

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 72 % dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 58 % oral

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 72 % Inhalation - vapour

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 72 % Inhalation - mist

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:

Prolonged contact may cause allergic skin reactions.

KEEP OUT OF REACH OF CHILDREN.

May cause eye irritation.

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 3/11
(30495803/SDS_GEN_US/EN)

Avoid ingestion.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of mists/vapours.
Wash thoroughly after handling.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
64-02-8	10.0 - 15.0%	tetrasodium ethylenediaminetetraacetate
2634-33-5	10.0 - 15.0%	1,2-benzisothiazol-3(2H)-one
68920-42-3	10.0 - 15.0%	Bacteria, complex with amylase and proteinase

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
	100.0 %	Proprietary ingredients

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 4/11
(30495803/SDS_GEN_US/EN)

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide,
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code.

Conditions for safe storage, including any incompatibilities

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 5/11
(30495803/SDS_GEN_US/EN)

Segregate from incompatible substances. Segregate from foods and animal feeds.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

8. Exposure Controls/Personal Protection

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	viscous, liquid
Odour:	pleasant
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	amber to brown
pH value:	8.5 - 9.0
Boiling point:	not determined
Flash point:	not applicable
Flammability:	Product is combustible.
Lower explosion limit:	not applicable
Upper explosion limit:	not applicable

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 6/11
(30495803/SDS_GEN_US/EN)

Autoignition:	not applicable
Vapour pressure:	not applicable
Density:	approx. 1 g/cm ³ (20 °C)
Relative density:	1.01 - 1.02
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Self-ignition temperature:	not self-igniting
Thermal decomposition:	Stable at ambient temperature.
Viscosity, dynamic:	not determined
Solubility in water:	completely soluble
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not applicable

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions known.

Conditions to avoid

Avoid extreme temperatures.

Incompatible materials

strong acids, strong alkalis

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products known.

Thermal decomposition:
Stable at ambient temperature.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 7/11
(30495803/SDS_GEN_US/EN)

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Ingestion may result in irritation and gastric disturbances. Can cause sensitization of the respiratory tract in allergic persons.

Oral

Type of value: ATE
Value: 1,120 mg/kg

Information on: 1,2-benzisothiazol-3(2H)-one

Type of value: LD50
Species: rat (male/female)
Value: 1,450 mg/kg
Literature data.

Inhalation

Type of value: ATE
Value: > 20.0000 mg/l
Determined for vapor

Type of value: ATE
Value: > 5.0000 mg/l
Determined for mist

Dermal

Type of value: ATE
Value: > 5,000 mg/kg

Information on: 1,2-benzisothiazol-3(2H)-one

Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg
Literature data.

Irritation / corrosion

Assessment of irritating effects: Contact may result in eye irritation. Skin contact may cause irritation and dermatitis. Prolonged contact with the product can result in skin irritation.

Skin

Information on: 1,2-benzisothiazol-3(2H)-one

Species: rabbit
Result: Irritant.
Literature data.

Eye

Information on: 1,2-benzisothiazol-3(2H)-one

Species: rabbit
Result: Severely irritating.
Literature data.

Sensitization

Assessment of sensitization: Exposure to respirable aerosols and dusts of various enzymes may cause sensitization of the respiratory tract in predisposed individuals. Prolonged or repeated skin contact may cause sensitization or allergic reactions.

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 8/11
(30495803/SDS_GEN_US/EN)

Information on: 1,2-benzisothiazol-3(2H)-one
Guinea pig maximization test
Species: guinea pig
Result: Caused skin sensitization in animal studies.
Method: OECD Guideline 406
Literature data.

Chronic Toxicity/Effects

Carcinogenicity

Assessment of carcinogenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Other Information

Attention - The product has not yet been fully tested. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Symptoms of Exposure

12. Ecological Information

Toxicity

Toxicity to fish

Information on: 1,2-benzisothiazol-3(2H)-one
LC50 (96 h) 1.6 mg/l, Oncorhynchus mykiss (Flow through.)
Literature data.

Aquatic invertebrates

Information on: 1,2-benzisothiazol-3(2H)-one
EC50 (48 h) 2.1 mg/l, Daphnia magna (static)
Literature data.

Aquatic plants

Information on: 1,2-benzisothiazol-3(2H)-one
EC50 (96 h) 0.055 mg/l, Pseudokirchneriella subcapitata (static)
Literature data.

Persistence and degradability

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 9/11
(30495803/SDS_GEN_US/EN)

Elimination information

Biodegradable.

Assessment biodegradation and elimination (H₂O)

Information on: 1,2-benzisothiazol-3(2H)-one

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

This product is not regulated by RCRA.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM

Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 10/11
(30495803/SDS_GEN_US/EN)

Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains 1,2-BENZISOTHIAZOL-3(2H)-ONE)

Air transport IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHS
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains 1,2-BENZISOTHIAZOL-3(2H)-ONE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

16. Other Information

SDS Prepared by:

BASF NA Product Regulations
SDS Prepared on: 2015/06/01

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Safety Data Sheet

VECTOR BIO-5

Revision date : 2015/06/01
Version: 2.0

Page: 11/11
(30495803/SDS_GEN_US/EN)

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