SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Safety data sheet number VBC-0132

Issuing Date 29-Jan-2026 **Revision date** 08-Apr-2026 **Revision Number** 3

1. Identification

Product identifier

Product Name XENTARI WG BIOLOGICAL INSECTICIDE
Registration Number(s) PCP 31557

Product Code(s) 77782

List Number A512048

Other means of identification

Other information No information available

Recommended use of the chemical and restrictions on use

Recommended use Agricultural Insecticide

Restrictions on use It is a violation of Federal Law to use this product in a manner inconsistent with its pesticide label

Details of the supplier of the safety data sheet

Initial supplier identifier
VALENT CANADA, INC.
201-230 Hanlon Creek Blvd.
Guelph, Ontario N1C 0A1

Manufacturer Address
Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, Illinois 60048

Emergency telephone number

Emergency Telephone Valent BioSciences LLC, Product Information: (800)323-9597
Health Emergency (24 hr): 1-877-315-9819
US Transportation (24 hr): CHEMTREC: 800-424-9300
International Transportation (24 hr): 703-527-3887

2. Hazard(s) identification

Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2A

Label elements

Warning

Hazard statements
Causes serious eye irritation.

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear eye and face protection.

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label).
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice and attention.

Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Bacillus Thuringiensis subsp aizawai strain ABTS-1857 solids, spores, insecticidal spores	NA	54	-	-
Other Ingredients – Non-Hazardous	NONE	46	-	-

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open

while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact Wash skin with soap and water.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, alcohol-resistant foam or water spray.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Explosion risk: Avoid generation of dust. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with eyes. Do not breathe dust. Avoid contact with skin, eyes or clothing.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Prevent dust cloud. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Methods for cleaning up Take up with inert, damp, non-combustible material using clean non-sparking tools and

place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Protect from physical damage. Protect from sunlight.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits This product, as supplied, contains materials that do not have reportable occupational exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Note See section 16 for terms and abbreviations.

Appropriate engineering controls

Engineering controls It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection In case of inadequate ventilation wear respiratory protection. Filter type: MSHA/NIOSH: TC-21; NIOSH: N, P R, HE. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and

evacuation may be required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Granules
Physical state	Solid
Color	yellow to brown
Odor	Organic-like odor, Malt-like

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability		None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
SADT (°C)	No data available	None known
pH	approx. 4.1	10% dilution in water
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition Coefficient (n-octanol/water)	No data available	None known
Vapor pressure	No data available	None known
Relative density	No data available	None known
Bulk density	0.391-0.458 g/ml	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

10. Stability and reactivity

Reactivity Combustible dust.

Chemical stability MAY FORM COMBUSTIBLE DUST- AIR MIXTURE.

Possibility of hazardous reactions Dust can form an explosive mixture with air.

Conditions to avoid Excessive heat. Heating in air. Generation/formation of dust.

Incompatible materials None known based on information supplied.

Hazardous decomposition products Carbon oxides and unidentified organic compounds.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Causes serious eye irritation.

Skin contact Prolonged contact may cause redness and irritation.

Ingestion Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity

Product Information
Oral LD50 > 5000 mg/kg (rat)
Dermal LD50 > 2000 mg/kg (rabbit)
Inhalation LC50 > 5.33 mg/L

Component Information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.
Product Information

Method	Species	Exposure route	Effective dose	Exposure time	Results
Skin corrosion/irritation	-	Skin	-	-	Not Corrosive Mild skin irritant (slight erythema, reversible by day 7)

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.
Product Information

Method	Species	Exposure route	Effective dose	Exposure time	Results
Eye damage/Irritation	-	eye	-	-	Irritant (cleared by day 14)

Respiratory or skin sensitization Based on available data, the classification criteria are not met.
Product Information

Method	Species	Exposure route	Results
Skin sensitization	Guinea pig	Dermal	Not a skin sensitizer

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard Not applicable.

12. Ecological information

Ecotoxicity No information available.

Aquatic ecotoxicity

Product Information

96-hour LC50 > 100 mg/L, *Oncorhynchus mykiss*
48-hour EC50 > 12 mg/L, *Daphnia magna*

Component Information

Chemical name	Fish	Crustacea	Algae/aquatic plants	Toxicity to microorganisms
Bacillus Thuringiensis subsp aizawai strain ABTS-1857 solids, spores, insecticidal spores CAS: NA ID: RM316930 54 %	>100 mg/L (96-H, Rainbow trout)	NOEC 5.9 mg/L (Daphnia; 10 day semi static)	-	-

Terrestrial ecotoxicity Bird:
NOEL: 1714 mg/kg (3.4 x 1011 cfu/kg); Dietary: Bobwhite quail, Mallard duck.

Chemical name	Earthworm	Avian	Honeybees
Bacillus Thuringiensis subsp aizawai strain ABTS-1857 solids, spores, insecticidal spores CAS: NA ID: RM316930 54 %	-	NOEL 1714 mg /kg /Day (3.4 x 1011 cfu/kg) (Dietary - Bobwhite Quail & Mallard Duck)	-

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

TDG	Not regulated
DOT	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Other Regulations

PCP 31557
Pesticide products in Canada are registered by PMRA and are subject to certain labeling requirements under federal pesticide law. The label, as specified in the Pest Control Products Act, is the main document to be followed for safety, use, and handling. These label requirements may differ from the classification criteria and hazard information required under WHMIS GHS for the data sheets and for workplace labels of non-pesticide chemicals. The following hazard information is required on the product label.

CAUTION EYE IRRITANT
POTENTIAL SENSITIZER
KEEP OUT OF REACH OF CHILDREN

PRECAUTIONS:
KEEP OUT OF REACH OF CHILDREN
May cause sensitization. May irritate eyes. Avoid contact with eyes. Wear a long-sleeved shirt, long pants, shoes and socks, eye goggles, and NIOSH approved respirator with any N-95, R95 or P-95 filter for biological products when handling, mixing/loading or applying the product and during all clean-up and repair activities. When applicators use closed systems (e.g. enclosed cabs) the personal protective equipment may be reduced or modified. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

When used in greenhouse, do not re-enter or allow re-entry into treated areas until the spray is dried unless wearing appropriate personal protective equipment, including a long-sleeved shirt, long pants, shoes plus socks, eye goggles and waterproof gloves. In addition, a dust-mist filtering respirator/mask (NIOSH approval number prefix TC-21C) or NIOSH approved respirator (with any N-95, P-95, R-95 or HE filter for biological products) is required until spray mist has settled.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife

Canada's web site at: www.croplife.ca.

STORAGE
In order to ensure microbial purity and potency, VectoBac 200G should be stored in the original container at 0°C to 25°C and use within 24 months of the date of manufacture. Store container upright and keep tightly closed when not in use. To prevent contamination store this product away from food or feed.

DISPOSAL
Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instruction for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Exempt.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.
TCSI	Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

16. Other information

NFPA	**Health hazards** 2	**Flammability** 1	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 0	**Personal protection** X

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Key or legend to abbreviations and acronyms used in the safety data sheet
List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds

vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Key literature references and sources for data used to compile the SDS
U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
U.S. Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

Issuing Date 29-Jan-2026

Revision date 08-Apr-2026

Revision Note Initial release.

Disclaimer

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. It is the users’ own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.
This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, “Hazcom”). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.

End of Safety Data Sheet