

syngenta.

VIXERAN® contains the endophytic bacterium Azotobacter salinestris strain CECT 9690, which fixes atmospheric nitrogen (N) and converts it into a form that can be absorbed by the plants. The bacteria will colonise both the leaf and the root, improving crop growth, yield, and quality of the crops.

Manufacturer	Distributor
CERES BIOTICS TECH, S.L.	Syngenta UK Limited
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In case of toxic or transport emergency ring 01484 538444 any time

PROTECT FROM FROST. SHAKE WELL BEFORE USE.

SAFETY PRECAUTIONS (a) Operator protection

Keep out of the reach of children.

Do not breathe dust.

Do not eat, drink or smoke during use.

Do not ingest. In case of contact with the eyes and/or

mucous membranes, wash the affected area with plenty of water.

Contains microorganisms. May cause sensitisation reactions. The use of respiratory protection equipment (disposable respirator or filtering mask, at least EN 149FFP3 or equivalent) is recommended when handling the preparation or applying the product. Avoid contact with skin and eyes.

Apply with appropriate health precautions and do respect safety practices. Use appropriate personal protective equipment and wash hands after using the product.

(b) Environmental Protection

Do not exceed the recommended dose rates.

Do not contaminate water with the product or its container. Do not clean application equipment near surface water.

Avoid contamination via drains from farmyards and roads.

(c) Storage and disposal

Product is stable under storage and disposal conditions.

Keep containers tightly closed and in original containers when not in use in fresh and well aerated location, with temperature between 5° and 35° C.

Avoid direct sunlight and other heat sources.

The product is not combustible.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times.

Add washings to sprayer at time of filling and dispose of safely.



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container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved

waste handling site for recycling or disposal.

Do not re-use empty containers. SECTION 14: Transport information 14.1 UN number

Not regulated as a dangerous good 14.2 UN proper shipping name Not regulated as a dangerous good 14.3 Transport hazard class(es) Not regulated as a dangerous good 14.4 Packing group

Not regulated as a dangerous good 14.5 Environmental hazards Not regulated as a dangerous good 14.6 Special precautions for user Remarks: Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable for product as supplied.

SECTION 15: Regulatory information 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law UK REACH List of restrictions (Annex 17): Not applicable

UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation: Not applicable The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain): Not applicable Regulation (EC) No 1005/2009 on substances that deplete the ozone laver: Not applicable UK REACH List of substances subject to authorisation (Annex XIV): Not applicable GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable

15.2 Chemical safety assessment A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

Control of Major Accident Hazards Regulations

SECTION 16: Other information Full text of other abbreviations GB EH40: UK. EH40 WEL - Workplace

2015 (COMAH): Not applicable

Exposure Limits GB EH40 / TWA: Long-term exposure limit (8-hour TWA reference period) ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AllC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight;

CLP - Classification Labelling Packaging

Regulation; Regula-tion (EC) No 1272/2008;

CMR - Carcinogen, Mutagen or Reproductive Toxicant: DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number: ECx - Concentration associated with x% response: ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration as sociated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good La-boratory Practice; IARC - International Agency for Research on Cancer: IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods: IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization: KECI - Korea 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration: NO(A)EL - No Observed (Adverse) Ef-fect Level: NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development: OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic sub-stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR (Quantitative) Structure Activity Relationship; RÈACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT -Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Verv Persistent and Very Bioaccumulative

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

COMPOSITION L1111575 GBRI/11B

Azotobacter salinestris strain CECT 9690 at 1 × 10⁷ CFU/g as a wettable powder.

DIRECTIONS FOR USE

BEFORE APPLYING THE PRODUCT, READ THE LABEL CAREFULLY.

GENERAL INFORMATION

VIXERAN® contains the endophytic bacterium Azotobacter salinestris strain CECT 9690, which fixes atmospheric nitrogen (N) and converts it into a form that can be absorbed by the plants. The bacteria will colonise both the leaf and the root, improving crop growth, yield, and quality of the crops.

Dose and Application Methods

VIXERAN® can be applied to a wide range of crops including, but not limited to arable, potato, grass, field vegetables and cover crops.

Foliar spray application

It is important that both the crop and the soil are not covered when spraying, to ensure the product can colonise both the leaves and the roots. Generally, VIXERAN® can be applied during the whole crop's growth cycle however, we recommend the following timing of application:

Crop	Dose rate	Recommended timing of applications	Recommended number of applications	Recommended water volume (lt/ha)
Cereals	50 g/ha	GS13-16 (three leaves unfolded - six leaves unfolded) GS22-33 (two tillers detectable - node three at least 2cm above node 2)	1 to 2	100-400
Pulses		GS16 (six leaves unfolded) to start of flowering	1	
Maize		GS12-16 (two leaves unfolded - six leaves unfolded)	1	
Oilseed rape		GS11-16 (first leaf unfolded - six leaves unfolded) GS29-31 (End of shoot development - one visibly extended internode)	1 to 2	
Potato	1	From in-furrow to start of flowering	1 to 3	
Sugar beet		GS12-16 (two leaves unfolded - six leaves unfolded)	1	
Cover crops	1	1 week post emergence	1	
Permanent grassland		Early spring, then 1 week after every cut	1 to 4	

TANK MIXING

VIXERAN® is compatible with many fertilisers, biostimulants and crop protection products. For more information, please contact the manufacturer. Check the compatibility list on the website: www.syngenta.co.uk.

Dilute any tank mix partners with water first before adding the VIXERAN®.

FOLLOWING CROPS

There are no restrictions on crops following an application of VIXERAN® in the previous season.

When preparing VIXERAN® for application:

- Gradually pour the VIXERAN® into the spray solution, stirring continuously to achieve a uniform suspension.
- . It is recommended to pre-dilute VIXERAN® with a small quantity of water prior to pouring into the spray tank.
- The spray mix must be kept agitated during mixing and application.
- Avoid low water temperatures below 5°C.

APPLICATION

For best results:

- Ensure good leaf coverage.
- The crop must be actively growing at the time of application.
- Do not apply when air temperature is below 5°C
- Low average day temperatures (less than 100C) post application will reduce colonisation speed.

After spraying

Thoroughly wash all spray equipment with water immediately after use.

COMPANY ADVISORY INFORMATION

The manufacturer guarantees the composition, formulation and content and the user will be responsible for damages caused by total or partial non-observance of the label instructions.

Symptoms: Nonspecific. No symptoms known porn acute and delayed

4.2 Most important symptoms and effects, DO NOT INDUCE VOMITING. immediately and show this container or label.

If swallowed: If swallowed, seek medical advice immediate medical attention is required. at least 15 minutes. Remove contact lenses. pienty of water, also under the eyelids, for In case of eye contact: Rinse immediately with contaminated clothing before re-use. ırrıtatıon persists, call a physician. Wash off immediately with plenty of water. If skin contaminated clothing immediately. Wash in case of skin contact: Take off all buysician or poison control centre immediately. respiration. Keep patient warm and at rest. Call a is irregular or stopped, administer artificial It inhaled: Move the victim to fresh air. If breathing center or physician, or going for treatment. calling the emergency number, a poison control label or Safety Data Sheet with you when General advice: Have the product container, 4.1 Description of first aid measures and cleaning up SECTION 4: First aid measures

> Components: Remarks: No hazardous ingredients 3.2 Mixtures arneiberts

SECTION 3: Composition/information on

bioaccumulative (vPvB) at levels of 0.1% or higher. and toxic (PB1), or very persistent and very considered to be either persistent, bioaccumulative Lhis substance/mixture contains no components

2.3 Other hazards

statement(s) required pazard statement(s), no precautionary No hazard pictogram, no signal word, no

2019/720, and UK SI 2020/1567) as amended by GB-CLP Regulation, UK SI

Labelling (REGULATION (EC) No 1272/2008) 2.2 Label elements Not a hazardous substance or mixture.

2019/720, and UK SI 2020/1567) as amended by GB-CLP Regulation, UK SI Classification (REGULATION (EC) No 1272/2008) 2.7 Classification of the substance or mixture

SECTION 2: Hazards identification Emergency telephone number: +44 1484 538444

1.4 Emergency telephone number broduct.technical_enquines@syngenta.com E-mail address of person responsible for the SDS: [elefax: +44 (0) 1223 882195 Telephone: +44 (0) 1223 883400 KINGGOM

Park, Fulbourn, Cambridge, CB21 5XE, United Company: Syngenta UK Limited, CPC4, Capital 199US ETED

1.3 Details of the supplier of the safety Use of the Substance/Mixture: Biostimulant

or mixture and uses advised against 1.2 Relevant identified uses of the substance

Design code: A23780B Irade name: VIXERAN 1.1 Product identifier

mixture and of the company/undertaking SECTION 1: Identification of the substance/ O.f v feety Data Sheet v feety

No special storage conditions required. Keep Requirements for storage areas and containers: any incompatibilities 7.2 Conditions for safe storage, including

or smoke. For personal protection see section 8. with skin and eyes. When using do not eat, drink measures against fire required. Avoid contact Advice on safe handling: No special protective 7.1 Precautions for safe handling

SECTION 7: Handling and storage

Reter to protective measures listed in sections For disposal considerations see section 13., 6.4 Reference to other sections and dispose of contaminated wash water. Clean with detergents. Avoid solvents. Retain air. Clean contaminated surface thoroughly. powder cloud by using a brush or compressed regulations (see section 13). Do not create a a container for disposal according to local cleaner or by wet-brushing and transfer to bick up with an electrically protected vacuum Methods for cleaning up: Contain spillage,

5.3 Methods and material for containment

intorm respective authorities. product contaminates rivers and lakes or drains surface water or sanitary sewer system. If the Environmental precautions: Do not flush into 6.2 Environmental precautions

tormation.

measures listed in sections 7 and 8. Avoid dust Personal precautions: Refer to protective ednibment and emergency procedures 6.1 Personal precautions, protective

SECTION 6: Accidental release measures

Cool closed containers exposed to fire with rice Tignting to enter drains of water courses. Further information: Do not allow run-off from preaming apparatus.

Wear full protective clothing and self-contained Special protective equipment for firefignters:

5.3 Advice for firefighters broducts may be a nazard to nealth. (see section 10). Exposure to decomposition

containing hazardous products of combustion components, tire will produce dense black smoke the product contains combustible organic Specific hazards during fire-fighting: As substance or mixture

5.2 Special hazards arising from the

water stream as it may scatter and spread fire. Dusuitable extinguishing media: Do not use a solid resistant toam or water spray Extinguishing media - large fires: Alcohol-

carbon dioxide. sbray, alcohol-resistant foam, dry chemical or

EXCIDENTIA MEDIA - SMAII TIPES: USE WATER enigable extinguisming media: 5.1 Extinguishing media

SECTION 5: Firefighting measures

available. Treat symptomatically. Leatment: There is no specific antidote attention and special treatment needed 4.3 Indication of any immediate medical or expected.

IIIII: NO Q919 9A9II9DIG Lower explosion limit / Lower flammability IIIIII: NO Q919 9A9119DIG

Upper explosion limit / Upper fiammability Fiammability (solid, gas): No data avallable Figsh point: No data available ROIIIUG DOIUL/DOIIIUG LSUGE: NO GSES SASIISDIE Melting point/range; 86 °C

DH: V.U - 8.5, CONCENTRAION: 1 %W/V Odour Threshold: No data available

Daour: eariny Colour: white

Appearance: wettable powder cuemicai properties

9.1 Information on basic physical and SECTION 9: Physical and chemical properties

appropriate professional advice. sejecting personal protective equipment, seek nse ot personal protective equipment. When measures should always have priority over the Protective measures: The use of technical certified respirators.

the exposure limit they must use appropriate When workers are facing concentrations above brotective equipment normally required. Respiratory protection: No personal respiratory

reduirements. and body protection based on the physical Job protective equipment required. Select skin

2kin and body protection: No special protective equipment required. Hand protection - Remarks: No special

eduipment required.

Eye/face protection: No special protective Personal protective equipment

Where necessary, seek additional occupational pejow occupational exposure standards. actual risks in use. Maintain air concentrations tuese brotection measures depends on the exposure cannot be eliminated. The extent of celiable technical protection measure if

Containment and/or segregation is the most Engineering measures

8.2 Exposure controls exposure limit values.

Contains no substances with occupational

pygiene advice.

Basis: GB EH40 (Respirable fraction)

AWT :(erusodxe) of exposure): TWA cm/gm ₽

Basis: GB EH40 Value type (Form of exposure): TWA (Inhalable)

10 mg/m³ dust of any kind

laid down on the product label.

Occupational Exposure Limits 8.1 Control parameters protection

SECTION 8: Exposure controls/personal

broduct, piease refer to the approval conditions Specific use(s): For proper and safe use of this 7.3 Specific end use(s)

animal feedingstuffs. of children. Keep away from food, drink and well-ventilated place, keep out of the reach containers tigntly closed in a dry, cool and

waterways or ditches with chemical or used Product: Do not contaminate ponds, 13.1 Waste treatment methods SECTION 13: Disposal considerations

2018/605 at levels of 0.1% or higher. 2017/2100 or Commission Regulation (EU) or Commission Delegated regulation (EU) properties according to reach Article 57(1) cousidered to have endocrine disrupting wixente does not contain components Fugocujue gialubring potential: The substance/

Product: 12.6 Other adverse effects (VPVB) at levels of U.1% or nigner. or very persistent and very bioaccumulative bersistent, bioaccumulative and toxic (PB1), uo components considered to de either

Assessment: This substance/mixture contains Product:

12.5 Results of PBT and vPvB assessment No data available

lios ni yfilidoM 4.21 No data available 12.3 Bioaccumulative potential

> No data available 12.2 Persistence and degradability No data available

TZ.7 IOXICITY SECTION 12: Ecological information

Product: Remarks: No data available Further Information Ingestion, Inhalation, Skin contact, Eye contact Information on likely routes of exposure: 1.11 Information on toxicological effects

SECTION 11: Toxicological information hazardous decomposition products are known.

Hazardous decomposition products: No 10.6 Hazardous decomposition products Materials to avoid: None known. 10.5 Incompatible materials as directed.

Conditions to avoid: No decomposition if used 10.4 Conditions to avoid known under conditions of normal use. Hazardous reactions: No dangerous reaction

10.3 Possibility of hazardous reactions Stable under normal conditions. 10.2 Chemical stability

None reasonably foreseeable. 10.1 Reactivity

SECTION 10: Stability and reactivity Faricie Size: No data availadie

9.2 Other information is not classified as oxidizing. Oxidizing properties: The substance of mixture Explosive properties: Not explosive Viscosity, kinematic: No data available Decomposition temperature: No data available Auto-ignition temperature: No data available

Partition coefficient: n-octanol/water: No data Solubility in other solvents: No data available Water solubility: completely soluble Bulk density: 0.6 - 0.85 g/cm3 Density: No data available

Asbonl bressure: No data available