SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	SONATA
Product code (UVP)	80900007
UFI	UEW1-E0DR-K00G-K4A1 (for Northern Ireland only)

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

Use	Fungicide

1.3 Details of the supplier of the safety data sheet

Supplier	Bayer CropScience Limited PO Box 1582 CB1 0FE Cambridge United Kingdom
Telephone	+44(0)1223 226500
FOR NORTHERN IRELAND:	Bayer CropScience Ltd Bayer Ltd 1st Floor, The Grange Offices The Grange, Brewery Road Stillorgan Co. Dublin A94 H2K7 Ireland
Telephone	+353 1 216 3300
Responsible Department	Email: gb-bcs-crop-regulatory-affairs@bayer.com

1.4 Emergency telephone no.

Emergency telephone no.	0330 678 3382 (24 hr) For Medical Professionals: You can also contact the relevant NPIS. For Members to the Public: You can contact NHS111 (for GB) or your local GP (for Northern Ireland) National Poisons Information Centre UK: 0344 892 0111 National Poisons Information Centre Dublin: +353 1 809 2166

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Not classified, the classification criteria are not met.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

No hazard label for supply/use required.

2.3 Other hazards

Micro-organisms may have the potential to provoke sensitising reactions.

Evaluation of PBT/vPvB properties is not relevant for micro-organisms.

Ecological information:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)
Bacillus pumilus QST2808, >= 1.0E+09 CFU/g

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification REGULATION (EC) No 1272/2008	Conc. [%]
BACILLUS PUMILUS STRAIN QST2808		Not classified	1.38

Further information

For the full text of the H-Statements mentioned in this Section, see Section 16.

Particle characteristics

This substance/ mixture does not contain nanoforms

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet

5.2 Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Further information	Use appropriate extinguishing media for material that is supplying fuel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
6.2 Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. Clean with disinfectants.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.
6.4 Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
Hygiene measures	Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash thoroughly and put on clean clothing.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.
Suitable materials	HDPE (high density polyethylene)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No known occupational limit values.

8.2 Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance. Wear respirator with a particle filter mask (protection factor 20) conforming to European Norm EN149FFP3 or EN140P3 or equivalent.
Hand protection	Waterproof gloves
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Use personal protective equipment as required. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	light brown
Odour	sweet, earthy
Odour Threshold	No data available
Melting point/ range	No data available
Boiling point/boiling range	>= 100 °C
Flammability	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flash point	No data available
Auto-ignition temperature	No data available

Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
pH	5.2 - 5.4 (100 %) (23 °C)
Viscosity, dynamic	5 - 120 mPa.s (21 °C)
Viscosity, kinematic	No data available
Water solubility	dispersible
Partition coefficient: n-octanol/water	Bacillus Pumilus: No data available
Vapour pressure	No data available
Density	ca. 1.030 g/cm³ (20 °C)
Relative density	No data available
Relative vapour density	No data available
Assessment nano particles	This substance/ mixture does not contain nanoforms
Particle size	No data available

9.2 Other information

Explosivity	Not applicable
Oxidizing properties	No data available
Evaporation rate	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
10.4 Conditions to avoid	Protect from sunlight. Do not expose to temperatures exceeding 40 °C/ 104 °F.
10.5 Incompatible materials	No incompatible materials known.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008

Acute oral toxicity	LD50 (Rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) 2.36 mg/l Determined in the form of liquid aerosol. Highest attainable concentration. No deaths
Acute dermal toxicity	LD50 (Rabbit) > 5,050 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	No eye irritation (Rabbit)
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

Bacillus Pumilus: This information is not available.

Assessment STOT Specific target organ toxicity – repeated exposure

Bacillus Pumilus: This information is not available.

Assessment mutagenicity

Bacillus Pumilus: Test not required for microorganisms.

Assessment carcinogenicity

Bacillus Pumilus: Test not required for microorganisms.

Assessment toxicity to reproduction

Bacillus Pumilus: Test not required for microorganisms.

Assessment developmental toxicity

Bacillus Pumilus: Test not required for microorganisms.

Aspiration hazard

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

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
No further toxicological information is available.

11.2 Information on other hazards

Endocrine disrupting properties

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 2.430 mg/l Exposure time: 30 d The ecological data given are those of the active ingredient.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 58 mg/l Exposure time: 21 d The ecological data given are those of the active ingredient.
Toxicity to aquatic plants	EC50 (algae) > 100 mg/l Exposure time: 72 h The ecological data given are those of the active ingredient.

12.2 Persistence and degradability

Biodegradability	Evaluation of biodegradability is not relevant for micro-organisms.
Koc	Bacillus Pumilus:No data available

12.3 Bioaccumulative potential

Bioaccumulation	Evaluation of bioaccumulation is not relevant for micro-organisms.

12.4 Mobility in soil

Mobility in soil	Evaluation of mobility in soil is not relevant for micro-organisms.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment	Evaluation of PBT/vPvB properties is not relevant for micro-organisms.

12.6 Endocrine disrupting properties

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
Contaminated packaging	Not completely emptied packagings should be disposed of as hazardous waste.

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/UK 'Carriage' Regulations/RID/IMDG/IATA not classified as dangerous

goods.

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.1 – 14.5 Not applicable.

14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to IMO instruments
No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

UK and Northern Ireland Regulatory References

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)
Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009
Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)
EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits
Control of Pesticide Regulations 1986
Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II
Environmental Protection (Duty of Care) Regulations 1991
The Waste Management Licensing Regulations 1994 (as amended)
Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)
Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)
Water Resources Act 1991
Anti-Pollution Works Regulations 1999

Further information

WHO-classification: U (Unlikely to present acute hazard in normal use)

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EH40 WEL	Worker Exposure Limit
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SI	Statutory Instrument
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The above information is intended to give general health and safety guidance on the storage and transport of the product.
It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.
The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.
The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.
No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.