SAFETY DATA SHEET

DELEGATE™ 250 WG

Version	Revision Date:	SDS Number:	Date of last issue: -
0.0	30.05.2023	800080000105	Date of first issue: 30.05.2023

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of South Africa and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : DELEGATE™ 250 WG

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

Use of the Substance/Mixture : Plant Protection Product, Insecticide

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION
Manufacturer/importer
Corteva Agriscience RSA Proprietary Limited
Block A, 2nd Floor, Lakefield Office Park, 272 West Avenue
Centurion, Gauteng, 1063
SOUTH AFRICA

Customer Information Number : +27 (0) 12 683 5700
E-mail address : SDS@corteva.com

1.4 Emergency telephone number

24-Hour Local Emergency Contact: +27 82 895 0621
24-Hour Emergency Contact: +32 3 575 55 55

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Reproductive toxicity, Category 2	H361f: Suspected of damaging fertility.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

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Hazard pictograms :

Signal word : Warning

Hazard statements : H361f Suspected of damaging fertility.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0)

Additional Labelling

EUH208 Contains Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0). May produce an allergic reaction.

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No.	Classification	Concentration (% w/w)

	Registration number		
Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0)	935545-74-7	Skin Sens. 1B; H317 Repr. 2; H361f Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 1.000	24,96
spinosyn D	131929-63-0 603-209-00-0	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	0,0291
Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate	Not Assigned 01-2119976349-20, 01-2119976349-20-0003, 01-2119976349-20-0004, 01-2119976349-20-0005, 01-2119976349-20-0006, 01-2119976349-20-0007	Eye Irrit. 2; H319	>= 3 - < 10
Substances with a workplace exposure limit :			
Kaolin	1332-58-7 310-194-1		>= 30 - < 40

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled : Move person to fresh air. If person is not breathing, call an

emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

In case of skin contact	:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
In case of eye contact	:	Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.
If swallowed	:	No emergency medical treatment necessary.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Nitrogen oxides (NOx) Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Avoid dust formation. Use personal protective equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions

Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Prevent from entering into soil, ditches, sewers,underwater. See Section 12, Ecological Information.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. Pick up and arrange disposal without creating dust. Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.
Handle in accordance with good industrial hygiene and safety practice.
Smoking, eating and drinking should be prohibited in the application area.
Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Strong oxidizing agents

7.3 Specific end use(s)

Specific use(s) : Plant protection products subject to Regulation (EC) No 1107/2009.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Kaolin	1332-58-7	TWA (Respirable dust)	0,1 mg/m3	2004/37/EC
Titanium dioxide	13463-67-7	OEL-RL	10 mg/m3	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcinogenicity, which is based on GHS categorisation, including category 1A, 1B			
		TWA	2,4 mg/m3	Dow IHG

8.2 Exposure controls

Engineering measures

Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.

If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation.
Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Eye/face protection	:	Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.
Hand protection		
Remarks	:	Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Skin and body protection	:	Wear clean, body-covering clothing.
Respiratory protection	:	Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Granules.
Colour	:	White to off-white
Odour	:	Musty
Odour Threshold	:	No test data available
pH	:	8,7 (22,6 °C) Method: Measured (1% aqueous suspension)
Melting point/range	:	No test data available
Freezing point		Not applicable
Boiling point/boiling range	:	Not applicable
Flash point	:	Method: closed cup Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Density	:	Not applicable
Bulk density	:	0,5 g/cm3 (21,8 °C) Method: Tapped Volumetric
Solubility(ies)		
Water solubility	:	Disperses in water
Auto-ignition temperature	:	No test data available
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	No
Oxidizing properties	:	No

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

No decomposition if stored and applied as directed.
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong bases

10.6 Hazardous decomposition products

Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): > 5.000 mg/kg
Method: OECD Test Guideline 425
Symptoms: No deaths occurred at this concentration.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,06 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Acute oral toxicity	:	LD50 (Rat, female): > 5.000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5,50 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5.000 mg/kg

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Acute oral toxicity	:	LD50: > 4.000 mg/kg Method: OECD Test Guideline 401 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity	:	LD50: > 2.000 mg/kg Method: OECD Test Guideline 402 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute dermal toxicity

Kaolin:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg

Skin corrosion/irritation

Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Kaolin:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Result	:	Mild eye irritation

Kaolin:

Species	:	Rabbit
Result	:	No eye irritation

Respiratory or skin sensitisation

Product:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 429
Assessment	:	Does not cause respiratory sensitisation.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1B.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Remarks	:	For skin sensitization: Did not demonstrate the potential for contact allergy in mice.
Remarks	:	For respiratory sensitization: No relevant data found.

Germ cell mutagenicity

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Germ cell mutagenicity- Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Germ cell mutagenicity- Assessment	:	In vitro genetic toxicity studies were negative.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Kaolin:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Reproductive toxicity - Assessment : Suspected human reproductive toxicant
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.

STOT - single exposure

Product:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Kaolin:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Repeated dose toxicity

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Remarks : In animals, has been shown to cause vacuolization of cells in various tissues.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Remarks : No relevant data found.

Kaolin:

Remarks : Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Aspiration toxicity

Product:

Based on physical properties, not likely to be an aspiration hazard.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Based on physical properties, not likely to be an aspiration hazard.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Based on physical properties, not likely to be an aspiration hazard.

Kaolin:

Based on physical properties, not likely to be an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	EC50 (Lepomis macrochirus (Bluegill sunfish)): 12,52 mg/l Exposure time: 96 h Test Type: semi-static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 23,52 mg/l Exposure time: 48 h Test Type: semi-static test
Toxicity to algae/aquatic plants	:	Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

ErC50 (diatom Navicula sp.): 0,564 mg/l
Exposure time: 72 h

Toxicity to soil dwelling organisms : LC50: > 4.000 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

oral LD50: > 2.250 mg/kg
Species: Colinus virginianus (Bobwhite quail)

contact LD50: 0,079 µg/bee
Exposure time: 96 h
Species: Apis mellifera (bees)

oral LD50: 0,22 µg/bee
Exposure time: 96 h
Species: Apis mellifera (bees)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 2,69 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,228 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202 or Equivalent

LC50 (saltwater mysid Mysidopsis bahia): 0,355 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,06 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent

ErC50 (diatom Navicula sp.): 0,127 mg/l
End point: Biomass

Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent

ErC50 (Lemna gibba): > 14,2 mg/l
End point: Growth rate inhibition
Exposure time: 7 d
Test Type: semi-static test

M-Factor (Acute aquatic toxicity) : 100

Toxicity to microorganisms : EC50 (Bacteria): > 10 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 0,182 mg/l
End point: weight
Exposure time: 32 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test

LOEC: 0,392 mg/l
End point: weight
Exposure time: 32 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test

MATC (Maximum Acceptable Toxicant Level): 0,267 mg/l
End point: weight
Exposure time: 32 d
Species: Pimephales promelas (fathead minnow)
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,000062 mg/l
Species: Daphnia magna (Water flea)
Test Type: flow-through test

M-Factor (Chronic aquatic toxicity) : 1.000

Toxicity to soil dwelling organisms : LC50: > 500 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : oral LD50: > 2250 mg/kg bodyweight.
Species: Colinus virginianus (Bobwhite quail)

dietary LC50: > 5620 mg/kg diet.
Species: Colinus virginianus (Bobwhite quail)

oral LD50: 0,11 micrograms/bee
Exposure time: 48 h
Species: Apis mellifera (bees)

spinosyn D:

M-Factor (Acute aquatic toxicity)	:	10
M-Factor (Chronic aquatic toxicity)	:	10

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Biodegradability	:	Test Type: aerobic Inoculum: activated sludge Concentration: 20 mg/l Biodegradation: 0,1 - 9,1 % Exposure time: 28 d Method: OECD Test Guideline 301B or Equivalent Remarks: 10-day Window: Fail Remarks: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Biodegradability	:	Result: Readily biodegradable. Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Bioaccumulation	:	Species: Oncorhynchus mykiss (rainbow trout) Exposure time: 28 d Bioconcentration factor (BCF): 348
Partition coefficient: n-octanol/water	:	log Pow: 4,49 (20 °C) pH: 7 Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Partition coefficient: n-octanol/water	:	Remarks: No relevant data found.

12.4 Mobility in soil

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Distribution among environmental compartments : Remarks: Potential for mobility in soil is slight (Koc between 2000 and 5000).

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Distribution among environmental compartments : Remarks: No relevant data found.

12.5 Results of PBT and vPvB assessment

Product:

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

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Kaolin:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Product:

Endocrine disrupting potential : 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.

Components:

Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0):

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Fatty acid chlorides, C18 unsatd., reaction products with sodium N-methyltaurinate:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Kaolin:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14: Transport information

14.1 UN number

UNRTDG : UN 3077

IMDG : UN 3077

IATA : UN 3077

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Spinetoram)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Spinetoram)

IATA : Environmentally hazardous substance, solid, n.o.s.
(Spinetoram)

14.3 Transport hazard class(es)

UNRTDG : 9

IMDG : 9

IATA : 9

14.4 Packing group

UNRTDG

Packing group : III
Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : Stowage category A

IATA (Cargo)

Packing instruction (cargo aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

IMDG

Marine pollutant : yes(Spinetoram)

14.6 Special precautions for user

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country 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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the	E1	ENVIRONMENTAL HAZARDS

control of major-accident hazards involving dangerous substances.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.
The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.
Refer to the label for exposure assessment information.

SECTION 16: Other information

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.
Classification was done in accordance with UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Purple Book and complies with the Regulations for Hazardous Chemical Agents, 2021.

Full text of H-Statements

H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H361f	:	Suspected of damaging fertility.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Sens.	:	Skin sensitisation
2004/37/EC	:	Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
Dow IHG	:	Dow Industrial Hygiene Guideline
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
2004/37/EC / TWA	:	Long term exposure limit
Dow IHG / TWA	:	Time weighted average
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (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 - Emergen-

cy Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory 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) Effect 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 substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - 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 - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Repr. 2	H361f	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Product code: GF-1640

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.

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