

SAFETY DATA SHEET



Intrepid Edge®

Version 1.0 Revision Date: 05/12/2022 SDS Number: 800080005068 Date of last issue: -
Date of first issue: 05/12/2022

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 the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Intrepid Edge®

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 800-992-5994

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).
800-992-5994 or 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use insecticide product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization : Category 1

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H361f Suspected of damaging fertility.

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Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mist or vapors.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:
P405 Store locked up.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Methoxyfenozide	161050-58-4	28.3
Spinetoram J & L (CAS# 187166-40-1 & 187166-15-0)	935545-74-7	5.66
Propylene glycol	57-55-6	>= 3 - < 10
Naphthalenesulfonic acid, formaldehyde ammonium salt copolymer	9069-80-1	>= 3 - < 10
Balance	Not Assigned	> 40

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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. Wash skin with soap and

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- plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.
- 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.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : 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. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : 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 : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.
- Combustion products may include and are not limited to:
Nitrogen oxides (NO_x)
Carbon oxides
- 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.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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Special protective equipment for fire-fighters : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 In the event of fire, wear self-contained breathing apparatus.
 Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

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.
 Prevent spreading over a wide area (e.g., by containment or oil barriers).
 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.

Methods and materials for containment and cleaning up : Clean up remaining materials from spill with suitable absorbent.
 Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
 For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
 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 over-pressurization of the container.
 Keep in suitable, closed containers for disposal.
 Wipe up with absorbent material (e.g. cloth, fleece).
 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
 Do not breathe vapors/dust.
 Do not smoke.
 Handle in accordance with good industrial hygiene and safety practice.
 Avoid exposure - obtain special instructions before use.

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- Smoking, eating and drinking should be prohibited in the application area.
Do not get on skin or clothing.
Avoid inhalation of vapor or mist.
Do not swallow.
Avoid contact with skin and eyes.
Avoid contact with eyes.
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.
- Conditions for safe storage : Store in a closed container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.
- Materials to avoid : Strong oxidizing agents
- Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methoxyfenozide	161050-58-4	TWA (Respirable fraction)	3 mg/m ³	Dow IHG
		TWA (Inhalable fraction)	10 mg/m ³	Dow IHG
Propylene glycol	57-55-6	TWA	10 mg/m ³	US WEEL

- Engineering measures** : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.
Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

- 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
- Hand protection

- Remarks : Use gloves chemically resistant to this material. Examples of

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preferred glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. 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.

Eye protection : Use chemical goggles.
 Skin and body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid.
Color	: White
Odor	: Musty
Odor Threshold	: No data available
pH	: 8.16 (72.5 °F / 22.5 °C) Method: pH Electrode (1% aqueous suspension)
Melting point/range	: Not applicable
Freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 212 °F / > 100 °C Method: Pensky-Martens Closed Cup ASTM D 93
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Density	: 1.0733 g/cm ³ (68 °F / 20 °C)

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Method: Digital density meter

Solubility(ies)		
Water solubility	:	No data available
Autoignition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Explosive properties	:	No
Oxidizing properties	:	No significant increase (>5C) in temperature.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	No decomposition if stored and applied as directed. Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned. None known.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids Strong bases
Hazardous decomposition products	:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon oxides Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity	:	LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 423 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.28 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg

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Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Components:**Methoxyfenozide:**

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Symptoms: No deaths occurred at this concentration.
- Acute inhalation toxicity : LC50 (Rat): > 4.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Maximum attainable concentration.
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Symptoms: No deaths occurred at this concentration.

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

Propylene glycol:

- Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg
- Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Mist may cause irritation of upper respiratory tract (nose and throat).
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation**Product:**

- Species : Rabbit

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Method : OECD Test Guideline 404
Result : No skin irritation

Components:**Methoxyfenozone:**

Species : Rabbit
Result : No skin irritation

Propylene glycol:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation**Product:**

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

Components:**Methoxyfenozone:**

Species : Rabbit
Result : No eye irritation

Propylene glycol:

Species : Rabbit
Result : No eye irritation

Naphthalenesulfonic acid, formaldehyde ammonium salt copolymer:

Species : Rabbit
Result : Eye irritation

Respiratory or skin sensitization**Product:**

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : May cause sensitization by skin contact.
Method : OECD Test Guideline 429

Components:**Methoxyfenozone:**

Species : Guinea pig
Assessment : Does not cause skin sensitization.

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

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

Propylene glycol:

Species : human
Assessment : Does not cause skin sensitization.

Germ cell mutagenicity**Components:****Methoxyfenozide:**

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

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.

Propylene glycol:

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

Carcinogenicity**Components:****Methoxyfenozide:**

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

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

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

Propylene glycol:

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

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity**Components:****Methoxyfenozide:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Did not cause birth defects or any other fetal effects in laboratory animals.

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.

Propylene glycol:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.
Did not cause birth defects or any other fetal effects in laboratory animals.

STOT-single exposure**Product:**

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

Components:**Methoxyfenozide:**

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

Propylene glycol:

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

STOT-repeated exposure**Product:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity**Components:****Methoxyfenozide:**

Remarks : May cause methemoglobinemia, thereby impairing the blood's ability to transport oxygen.
In animals, effects have been reported on the following organs:

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Blood.
Liver.
Kidney.
Thyroid.

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.

Propylene glycol:

Remarks : In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Aspiration toxicity**Product:**

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

Components:**Methoxyfenozide:**

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

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

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

Propylene glycol:

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

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0203 mg/l
Exposure time: 48 h
Test Type: Static
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

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Test Type: static test
Method: OECD Test Guideline 201

- Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): > 1,500 mg/kg
Exposure time: 14 d
- Toxicity to terrestrial organisms : oral LD50 (*Colinus virginianus* (Bobwhite quail)): > 2000 mg/kg bodyweight.
- contact LD50 (*Apis mellifera* (bees)): 0.78 µg/bee
Exposure time: 48 h
- oral LD50 (*Apis mellifera* (bees)): 1.46 µg/bee
Exposure time: 48 h

Ecotoxicology Assessment

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

Components:**Methoxyfenozone:**

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 4.2 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)): 3.7 mg/l
Exposure time: 48 h
Test Type: flow-through test
Method: OECD Test Guideline 202 or Equivalent
- EC50 (*Midge* (*Chironomus riparius*)): 0.257 mg/l
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 3.4 mg/l
End point: Growth rate inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201 or Equivalent
- Toxicity to fish (Chronic toxicity) : NOEC (*Pimephales promelas* (fathead minnow)): 2.4 mg/l
Exposure time: 33 d
Test Type: flow-through test
- NOEC (*Cyprinodon variegatus* (sheepshead minnow)): 2.6 mg/l
Exposure time: 32 d
Test Type: flow-through test
- Toxicity to daphnia and other aquatic invertebrates (Chronic) : NOEC (*Daphnia magna* (Water flea)): 0.39 mg/l
End point: number of offspring

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ic toxicity) Exposure time: 21 d
Test Type: flow-through test

Toxicity to microorganisms : EC50 (Bacteria): 10,000 mg/l
Exposure time: 30 min

Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): > 1,213 mg/kg
Exposure time: 14 d

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

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

oral LD50 (*Apis mellifera* (bees)): > 100 micrograms/bee
Exposure time: 48 h

contact LD50 (*Apis mellifera* (bees)): > 100 micrograms/bee
Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

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

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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 fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.182 mg/l
 End point: weight
 Exposure time: 32 d
 Test Type: flow-through test

LOEC (Pimephales promelas (fathead minnow)): 0.392 mg/l
 End point: weight
 Exposure time: 32 d
 Test Type: flow-through test

MATC (Maximum Acceptable Toxicant Level) (Pimephales promelas (fathead minnow)): 0.267 mg/l
 End point: weight
 Exposure time: 32 d
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.000062 mg/l
 Test Type: flow-through test

M-Factor (Chronic aquatic toxicity) : 1,000

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

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

Toxicity to terrestrial organisms : oral LD50 (Colinus virginianus (Bobwhite quail)): > 2250 mg/kg bodyweight.
 dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620 mg/kg diet.
 oral LD50 (Apis mellifera (bees)): 0.11 micrograms/bee
 Exposure time: 48 h

Propylene glycol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test Guideline 202

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Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l
 End point: Growth rate inhibition
 Exposure time: 96 h
 Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l
 End point: number of offspring
 Exposure time: 7 d
 Test Type: semi-static test

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l
 Exposure time: 18 h

Persistence and degradability**Components:****Methoxyfenozone:**

Biodegradability : Result: Not readily biodegradable.
 Remarks: Biodegradation rate may increase in soil and/or water with acclimation.

Stability in water : Degradation half life: 1,572 d (25 °C) pH: 7

Photodegradation : Rate constant: 3.895E-11 cm³/s

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

Biodegradability : 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.

Propylene glycol:

Biodegradability : aerobic
 Result: Readily biodegradable.
 Biodegradation: 81 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F or Equivalent
 Remarks: 10-day Window: Pass

Biodegradation: 96 %
 Exposure time: 64 d
 Method: OECD Test Guideline 306 or Equivalent
 Remarks: 10-day Window: Not applicable

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Biochemical Oxygen Demand (BOD) : 69.000 %
Incubation time: 5 d

70.000 %
Incubation time: 10 d

86.000 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm³/s
Method: Estimated.

Bioaccumulative potential**Components:****Methoxyfenozone:**

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 11.0
Exposure time: 28 d
Method: Measured

Partition coefficient: n-octanol/water : log Pow: 3.72 (77 °F / 25 °C)
Method: OECD Test Guideline 107 or Equivalent
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

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

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 348
Exposure time: 28 d

Partition coefficient: n-octanol/water : log Pow: 4.49 (68 °F / 20 °C)
pH: 7
Remarks: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Propylene glycol:

Bioaccumulation : Bioconcentration factor (BCF): 0.09
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: -1.07
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

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Balance:

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

Mobility in soil**Components:****Methoxyfenozide:**

Distribution among environmental compartments : Remarks: Potential for mobility in soil is medium (Koc between 150 and 500).

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).

Propylene glycol:

Distribution among environmental compartments : Koc: < 1
Method: Estimated.
Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).

Balance:

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

Other adverse effects**Components:****Methoxyfenozide:**

Results of PBT and vPvB 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).

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

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

Results of PBT and vPvB 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).

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

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Propylene glycol:

Results of PBT and vPvB 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).

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

Naphthalenesulfonic acid, formaldehyde ammonium salt copolymer:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : 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**International Regulations****UNRTDG**

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Spinetoram, Methoxyfenozide)
Class	:	9
Packing group	:	III
Labels	:	9

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IATA-DGR

UN/ID No. : UN 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (Spinetoram, Methoxyfenozide)
 Class : 9
 Packing group : III
 Labels : Miscellaneous
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S.
 (Spinetoram, Methoxyfenozide)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : yes
 Remarks : Stowage category A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

Not regulated as a dangerous good

Further information

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L 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.

Special precautions for user

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.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Respiratory or skin sensitization
 Reproductive toxicity

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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US State Regulations**Pennsylvania Right To Know**

Propylene glycol 57-55-6

California Prop. 65

WARNING: This product can expose you to chemicals including sulphuric acid, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number : 62719-666

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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.

Full text of other abbreviations

Dow IHG : Dow Industrial Hygiene Guideline
US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)
Dow IHG / TWA : Time weighted average
US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency

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Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Revision Date : 05/12/2022

Product code: GF-3028

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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