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1. Identification

Product identifier used on the label

Merivon Xemium Brand Fungicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, fungicide

Details of the supplier of the safety data sheet

Company:

BASF Agricultural Solutions US LLC 2 TW Alexander Drive Research Triangle Park, NC 27713 USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 1039004

Registration number: EPA Registration number: 7969-310

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox. 3 (oral) Acute toxicity
Acute Tox. 4 (Inhalation - mist) Acute toxicity

Skin Corr./Irrit. 2 Skin corrosion/irritation Repr. Add. cat. lact. Reproductive toxicity

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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STOT SE 3 (irritating to Specific target organ toxicity — single exposure

respiratory system)

Aquatic Acute 1 Hazardous to the aquatic environment - acute Aquatic Chronic 1 Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H315 Causes skin irritation. H332 Harmful if inhaled. H301 Toxic if swallowed.

H362 May cause harm to breast-fed children.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves. P260 Do not breathe dust or mist.

P264 Wash contaminated body parts thoroughly after handling.
P263 Avoid contact during pregnancy and while nursing.
P270 Do not eat, drink or smoke when using this product.

Precautionary Statements (Response):

P312 Call a POISON CENTER or physician if you feel unwell.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or physician. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

P330 Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P391 Collect spillage.

P308 + P313 IF exposed or concerned: Get medical attention. P332 + P313 If skin irritation occurs: Get medical attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

Labeling of special preparations (GHS):

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Product contains the following components and may cause an allergic skin reaction: mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Pyraclostrobin

CAS Number: 175013-18-0 Content (W/W): 19.19 % Synonym: No data available.

Fluxapyroxad

CAS Number: 907204-31-3 Content (W/W): 21.33 % Synonym: No data available.

Benzenesulfonic acid, hydroxy-, polymer with formaldehyde, phenol and urea, sodium salt

Content (W/W): 1.0 - 3.0% Synonym: No data available.

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts

CAS Number: 68425-94-5 Content (W/W): 1.0 - 3.0%

Synonym: Residues (petroleum), catalytic reformer fractionator,

sulfonated, polymers with formaldehyde, sodium salts

bronopol

CAS Number: 52-51-7

Content (W/W): > 0.0 - < 0.1%

Synonym: 2-Bromo-2-nitro-1,3-propanediol; Bronopol

mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS Number: 55965-84-9 Content (W/W): < 0.1%

Synonym: 5-Chloro-2-methyl-3(2H)-isothiazolone mixt. with 2-methyl-3(2H)-

isothiazolone

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

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If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, hydrogen fluoride, Hydrogen chloride, hydrogen bromide, nitrogen oxides, halogenated compounds, sulfur oxides, silica compounds, cyanides

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No substance specific occupational exposure limits known.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed

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the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: liquid Odour: fruity

Odour threshold: Not determined since harmful by inhalation.

Colour: beige

pH value: approx. 6 - 8

(20°C)

Melting point: approx. -3 °C

Information based on the main

component/s.

Boiling point: approx. 100 °C

Flash point: No flash point - Measurement made

up to the boiling point.

Flammability: not applicable

Lower explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Upper explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Autoignition: 517 °C

Vapour pressure: approx. 23 hPa
Density: approx. 1.08 g/cm3

(20°C)

Vapour density: not applicable

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Partitioning coefficient n-

not applicable

octanol/water (log Pow): Thermal decomposition:

No decomposition if stored and handled as

prescribed/indicated.

Viscosity, dynamic: approx. 105 - 135 mPa.s

Solubility in water: dispersible Evaporation rate: not applicable

Other Information: If necessary, information on other physical and chemical

parameters is indicated in this section.

The product has not been tested. The statement has been derived from substances/products of a similar structure or

composition.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

not fire-propagating

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

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Assessment of acute toxicity: Of pronounced toxicity after single ingestion. Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

<u>Oral</u>

Type of value: LD50 Species: rat (male) Value: > 50 < 300 mg/kg

Inhalation

Type of value: LC50 Species: rat (female) Value: 2.81 mg/l An aerosol was tested.

Dermal

Type of value: LD50 Species: rat

Value: > 5,000 mg/kg No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. Skin contact causes irritation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Skin

Species: rabbit Result: Irritant.

<u>Eye</u>

Species: rabbit Result: non-irritant

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Species: guinea pig Result: Non-sensitizing.

Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

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Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Fluxapyroxad

Assessment of repeated dose toxicity: Adaptive effects were observed after repeated exposure in

animal studies.

Information on: Pyraclostrobin

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs. Target organs: Liver, gastrointestinal tract and nasal cavity

Information on: mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation. Based on available data, the classification criteria are not met.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Fluxapyroxad

Assessment of carcinogenicity: Indication of possible carcinogenic effect in animal tests. The effect is caused by an animal specific mechanism that has no human counter part.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Fluxapyroxad

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. May cause harm to children via breast-feeding.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

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Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Fluxapyroxad

LC50 (96 h) 0.29 mg/l, Cyprinus carpio (Fish test acute, semistatic)

LC50 (96 h) 0.546 mg/l, Oncorhynchus mykiss (OECD Guideline 203, static) LC50 (96 h) 1.15 mg/l, Lepomis macrochirus (OECD Guideline 203, static) LC50 (96 h) 0.466 mg/l, Pimephales promelas (OECD Guideline 203, static)

Information on: Pyraclostrobin

LC50 (96 h) 0.00616 mg/l, Oncorhynchus mykiss (EPA 72-1, Flow through.)

Aquatic invertebrates

Information on: Fluxapyroxad

EC50 (48 h) 6.78 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Information on: Pyraclostrobin

EC50 (48 h) 0.0157 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

EC50 (96 h) 0.00416 mg/l, Americamysis bahia

Aquatic plants

Information on: Fluxapyroxad

EC50 (72 h) 0.70 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

EC50 (96 h) 0.66 mg/l (growth rate), Pseudokirchneriella subcapitata EC10 (72 h) 0.31 mg/l (growth rate), Pseudokirchneriella subcapitata EC10 (96 h) 0.36 mg/l (growth rate), Pseudokirchneriella subcapitata

Information on: Pyraclostrobin

EC10 (7 d) 0.82 mg/l (growth rate), Lemna gibba EC50 (7 d) > 1.007 mg/l (growth rate), Lemna gibba EC50 (72 h) 0.011 mg/l (growth rate), Navicula pelliculosa

Chronic toxicity to fish

Information on: Fluxapyroxad

No observed effect concentration (33 d) 0.0359 mg/l, Pimephales promelas (OECD Guideline 210,

Flow through.)

Information on: Pyraclostrobin

No observed effect concentration (98 d) approx. 0.00235 mg/l, Oncorhynchus mykiss (OECD

Guideline 210, Flow through.)

Chronic toxicity to aquatic invertebrates

Information on: Fluxapyroxad

No observed effect concentration (21 d) 0.5 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

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Information on: Pyraclostrobin

No observed effect concentration (21 d) 0.004 mg/l, Daphnia magna (OECD Guideline 202, part 2,

semistatic)

The details of the toxic effect relate to the nominal concentration.

No observed effect concentration (31 d) 0.000365 mg/l, Mysidopsis bahia

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Pyraclostrobin

Not readily biodegradable (by OECD criteria).

Information on: Fluxapyroxad

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulation potential

Information on: Pyraclostrobin

Bioconcentration factor: 379 - 507, Oncorhynchus mykiss (OECD Guideline 305)

Accumulation in organisms is not to be expected.

Information on: Fluxapyroxad

Bioconcentration factor: 36 - 37 (28 d), Lepomis macrochirus (OECD Guideline 305)

Does not accumulate in organisms.

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Pyraclostrobin

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: Fluxapyroxad

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Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Hazard class: 6.1
Packing group: III

ID number: UN 2902 Hazard label: 6.1, EHSM

Proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains HETEROCYCLES)

Sea transport

IMDG

Hazard class: 6.1
Packing group: III

ID number: UN 2902 Hazard label: 6.1, EHSM Marine pollutant: YES

Proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains HETEROCYCLES)

Air transport

IATA/ICAO

Hazard class: 6.1
Packing group: III
ID number: UN 2902
Hazard label: 6.1

Proper shipping name: PESTICIDE, LIQUID, TOXIC, N.O.S. (contains HETEROCYCLES)

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road"

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Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
NJ	57-55-6	Propylene glycol
PA	57-55-6	Propylene glycol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including FORMALDEHYDE (GAS), which is known to the State of California to cause cancer, and TOLUENE, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Labeling requirements under FIFRA

This chemical is a pesticide product regulated 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 workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

WARNING:

KEEP OUT OF REACH OF CHILDREN.

May be fatal if swallowed.

Avoid contact with the skin, eyes and clothing.

16. Other Information

SDS Prepared by:

BASF Agricultural Solutions US NA Product Regulations

SDS Prepared on: 2024/03/26

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our

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operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET