

Safety Data Sheet

Systiva XS Xemium Brand Fungicide

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Version: 9.0

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(30626997/SDS_CPA_US/EN)

1. Identification

Product identifier used on the label

Systiva XS Xemium Brand Fungicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, fungicide

* 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.

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: | 638050 |
| Registration number: | EPA Registration number: 7969-308 |
| Synonyms: | Fluxapyroxad |

2. Hazards Identification

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

Classification of the product

| | | |
|-----------------|-----------------|--|
| Repr. | Add. cat. lact. | Reproductive toxicity |
| Aquatic Acute | 1 | Hazardous to the aquatic environment - acute |
| Aquatic Chronic | 1 | Hazardous to the aquatic environment - chronic |

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Label elements

Signal Word:
Warning

Hazard Statement:

| | |
|------|---|
| H362 | May cause harm to breast-fed children. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary Statements (Prevention):

| | |
|------|---|
| P273 | Avoid release to the environment. |
| P260 | Do not breathe dust or mist. |
| P263 | Avoid contact during pregnancy and while nursing. |
| P270 | Do not eat, drink or smoke when using this product. |
| P264 | Wash contaminated body parts thoroughly after handling. |

Precautionary Statements (Response):

| | |
|-------------|---|
| P391 | Collect spillage. |
| P308 + P313 | IF exposed or concerned: Get medical attention. |

Precautionary Statements (Disposal):

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

Hazards not otherwise classified

Labeling of special preparations (GHS):

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

3. Composition / Information on Ingredients

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

Fluxapyroxad

CAS Number: 907204-31-3
Content (W/W): 28.46 %
Synonym: No data available.

glycerol

CAS Number: 56-81-5
Content (W/W): ≥ 7.0 - $< 10.0\%$
Synonym: 1,2,3-Propanetriol; Glycerol

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)

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CAS Number: 55965-84-9
Content (W/W): > 0.0 - < 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:

Remove contaminated clothing.

If inhaled:

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

If on skin:

Wash thoroughly with soap and water

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

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

Hazards: 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, carbon dioxide, foam, dry powder

Special hazards arising from the substance or mixture

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Hazards during fire-fighting:

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

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:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Protect contents from the effects of light. Protect from air. 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. 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:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

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Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

Protect from temperatures below: 0 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

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

Components with occupational exposure limits

| | | |
|----------|----------|-----------------------------------|
| glycerol | OSHA Z1: | PEL 15 mg/m3 Total dust ; |
| | OSHA Z1: | PEL 5 mg/m3 Respirable fraction ; |

| | | |
|--------------|-----------|-------------|
| Fluxapyroxad | TWA value | 0.5 mg/m3 ; |
|--------------|-----------|-------------|

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

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) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed 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.

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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:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Remove contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

| | |
|---|---|
| Form: | liquid |
| Odour: | faint odour, sweetish |
| Odour threshold: | Not determined due to potential health hazard by inhalation. |
| Colour: | off-white, pink tint |
| pH value: | approx. 6 - 8 (approx. 1 %(m), approx. 20 °C) |
| Boiling point: | approx. 100 °C Information applies to the solvent. |
| Flash point: | No flash point - Measurement made up to the boiling point. |
| Flammability: | not applicable |
| Autoignition: | approx. 431 °C (Regulation 440/2008/EC, A.15) |
| Vapour pressure: | approx. 23 hPa (approx. 20 °C) Information based on the main component/s. |
| Density: | 1.134 g/cm ³ (20 °C) approx. 1.13 g/cm ³ (20 °C) |
| Vapour density: | not applicable |
| Partitioning coefficient n-octanol/water (log Pow): | not applicable |
| Thermal decomposition: | 160 °C, 30 kJ/kg (DSC (OECD 113)) 300 °C, 110 kJ/kg (DSC (OECD 113)) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1. |
| Viscosity, dynamic: | approx. 24 mPa.s (approx. 20 °C) |
| Solubility in water: | miscible |
| Other Information: | If necessary, information on other physical and chemical parameters is indicated in this section. |

10. Stability and Reactivity

Reactivity

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

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Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
Not an oxidizer.

Chemical stability

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

Possibility of hazardous reactions

No hazardous reactions known.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

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:

160 °C, 2.5 K/min (DSC (OECD 113))

300 °C, 2.5 K/min (DSC (OECD 113))

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

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

Assessment of acute toxicity: Slightly toxic after single ingestion. Relatively nontoxic after short-term inhalation. Relatively nontoxic after short-term skin contact.

Oral

Type of value: LD50

Species: rat (female)

Value: > 2,000 mg/kg (OECD Guideline 423)

No mortality was observed.

Inhalation

Type of value: LC50

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Species: rat (male/female)
Value: > 5.2 mg/l (OECD Guideline 403)
Exposure time: 4 h
An aerosol was tested.
No mortality was observed.

Dermal

Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 402)
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

Irritation / corrosion

Assessment of irritating effects: May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.

Skin

Species: rabbit
Result: Slightly irritating.

Eye

Species: rabbit
Result: Minimally irritating.

Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2-Methyl-4-Isothiazolin-3-one

Buehler test

Species: guinea pig

Result: sensitizing

Method: OECD Guideline 406

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

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.

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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.

Medical conditions aggravated by overexposure

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic (acute effect) to fish. Acutely toxic for aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Toxicity to fish

LC50 (96 h) 1.46 mg/l, *Oncorhynchus mykiss*

Aquatic invertebrates

EC50 (48 h) 45.29 mg/l, *Daphnia magna*

Aquatic plants

EC50 (72 h) 2.49 mg/l, *Pseudokirchneriella subcapitata*

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EC10 (72 h) 1.62 mg/l, *Pseudokirchneriella subcapitata*

Chronic toxicity to fish

Information on: Fluxapyroxad

*No observed effect concentration (33 d) 0.0359 mg/l, *Pimephales promelas* (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)*

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Information on: Fluxapyroxad

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Bioaccumulation potential

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

Information on: Fluxapyroxad

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

Additional information

Other ecotoxicological advice:

The product should not be allowed to reach either sewage waters or water purification plants.

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,

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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

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9

Packing group: III

ID number: UN 3082

Hazard label: 9, EHSM

Marine pollutant: YES

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains FLUXAPYROXAD)

Air transport

IATA/ICAO

Hazard class: 9

Packing group: III

ID number: UN 3082

Hazard label: 9, EHSM

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains FLUXAPYROXAD)

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 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 / listed

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

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State regulations

| <u>State RTK</u> | <u>CAS Number</u> | <u>Chemical name</u> |
|------------------|-------------------|----------------------|
| PA | 56-81-5 | glycerol |
| NJ | 56-81-5 | glycerol |

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

BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s), this product does not require a California Proposition 65 Warning.

NFPA Hazard codes:

Health: 1 Fire: 1 Reactivity: 0 Special:

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.

CAUTION:

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED.

Hazards to humans and domestic animals.

Wear a long-sleeved shirt, long pants, socks and shoes.

Wear chemical resistant protective gloves.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product.

As soon as possible, wash thoroughly and change into clean clothing.

DO NOT contaminate domestic or irrigation water, lakes, streams or ponds by the cleaning of equipment or the disposal of wastes.

16. Other Information

SDS Prepared by:

BASF Agricultural Solutions US NA Product Regulations

SDS Prepared on: 2024/01/30

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

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