

Safety Data Sheet

Revylok Fungicide

Revision date : 2023/12/21

Version: 2.2

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(30794644/SDS_CPA_US/EN)

1. Identification

Product identifier used on the label

Revylok 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:	1052486
Registration number:	EPA Registration number: 7969-503
Synonyms:	Revysol + Xemium

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	2	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.
H401	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.
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3. Composition / Information on Ingredients

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

1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

CAS Number: 1417782-03-6

Content (W/W): 26.04 %

Synonym: No data available.

Fluxapyroxad

CAS Number: 907204-31-3

Content (W/W): 8.68 %

Synonym: No data available.

Polymer in BI 82975; MORWET D-425 POWDER

CAS Number: Trade Secret

Content (W/W): ≥ 1.0 - $< 5.0\%$

Synonym: No data available.

Proprietary salt

CAS Number: Trade Secret

Content (W/W): > 0.0 - $< 0.2\%$

Synonym: No data available.

Proprietary Diol

CAS Number: Trade Secret

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

Synonym: No data available.

The specific chemical identity and/or percentage of composition is being withheld as a trade secret.

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4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

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:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

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.
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5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, Hydrogen chloride, hydrogen fluoride, hydrogen bromide, carbon dioxide, nitrogen oxides, halogenated compounds, sulfur oxides, Phosphorus compounds

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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.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

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Further information on storage conditions: Keep only in the original container. Protect containers from physical damage. Protect against contamination.

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

Fluxapyroxad TWA value 0.5 mg/m³ ;

1H-1,2,4-Triazole-1-ethanol, α-[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]-α-methyl-

TWA value 0.68 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. Wear face shield or tightly fitting safety goggles (chemical goggles) 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:

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

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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:	earthy
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	tan
pH value:	approx. 6 - 8 (1 %(m), 20 °C)
Melting point:	approx. 0 °C Information applies to the solvent.
Boiling point:	approx. 100 °C Information applies to the solvent.
Flash point:	Non-flammable.
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:	615 °C
SADT:	> 75 °C
Vapour pressure:	approx. 23.4 hPa Information applies to the solvent.
Density:	approx. 1.15 g/cm ³ (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	200 °C, 40 kJ/kg (onset temperature) 290 °C, 330 kJ/kg (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	approx. 170 mPa.s (20 °C)
Solubility in water:	dispersible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

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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

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

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:

200 °C

(onset temperature)

290 °C

(onset temperature)

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: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Oral

Type of value: LD50

Species: rat

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

No mortality was observed.

Inhalation

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Type of value: LC50

Species: rat

Value: > 2.834 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

Highest concentration technically achievable. No mortality was observed.

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 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: Not irritating to eyes and skin.

Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: No sensitizing effect.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Non-sensitizing.

Method: OECD Guideline 429

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: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

Assessment of repeated dose toxicity: Repeated oral exposure to large quantities may affect certain organs. Liver Based on available data, the classification criteria are not met.

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Information on: Fluxapyroxad

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

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:

Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

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

Toxicity to fish

LC50 (96 h) 2.83 mg/l, *Oncorhynchus mykiss*

Aquatic invertebrates

EC50 (48 h) 3.06 mg/l, *Daphnia magna*

Aquatic plants

EC50 (72 h) 3.54 mg/l (growth rate), *Pseudokirchneriella subcapitata*

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EC10 (72 h) 2.18 mg/l (growth rate), *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.)

Information on: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

No observed effect concentration (36 d) 0.027 mg/l, *Brachydanio rerio*

Chronic toxicity to aquatic invertebrates

Information on: Fluxapyroxad

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

Information on: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

No observed effect concentration (21 d) 0.01 mg/l, *Daphnia magna*

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: Fluxapyroxad

Not readily biodegradable (by OECD criteria).

Information on: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

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: Fluxapyroxad

Bioconcentration factor: 36 - 37 (28 d), *Lepomis macrochirus* (OECD Guideline 305)
Does not accumulate in organisms.

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Information on: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

*Bioconcentration factor: 385
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: Fluxapyroxad

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

Information on: 1H-1,2,4-Triazole-1-ethanol, α -[4-(4-chlorophenoxy)-2-(trifluoromethyl)phenyl]- α -methyl-

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

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9

Packing group: III

ID number: UN 3082

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Hazard label: 9, EHSM
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains MEFENTRIFLUCONAZOLE, 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 MEFENTRIFLUCONAZOLE, 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 / exempt

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

State regulations

State RTK

NJ

PA

CAS Number

Trade Secret

Trade Secret

Chemical name

Proprietary Solvent

Proprietary Solvent

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

WARNING: This product can expose you to chemicals including N,N-DIMETHYLFORMAMIDE, 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

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labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

KEEP OUT OF REACH OF CHILDREN.

Hazards to humans and domestic animals.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

Avoid contact with the skin, eyes and clothing.

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

Remove contaminated clothing and wash before reuse.

16. Other Information

SDS Prepared by:

BASF Agricultural Solutions US NA Product Regulations

SDS Prepared on: 2023/12/21

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.

END OF DATA SHEET