

Safety Data Sheet

MERIVON FUNGICIDE

Revision date : 2012/11/16
Version: 4.0

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(30552051/SDS_CPA_US/EN)

1. Product and Company Identification

Company
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Substance number: 000000390010
Synonyms: fluxapyroxad and pyraclostrobin

2. Hazards Identification

Emergency overview

WARNING:
KEEP OUT OF REACH OF CHILDREN.
May be fatal if swallowed.
Avoid contact with the skin, eyes and clothing.

See Product Label for additional precautionary statements.

State of matter: liquid
Colour: beige
Odour: faint odour, fruity

Potential health effects

Primary routes of exposure:

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

Acute toxicity:

Moderately toxic after single ingestion. Relatively nontoxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Irritation / corrosion:

May cause slight but temporary irritation to the eyes. May cause moderate irritation to the skin.

Assessment other acute effects:

Causes temporary irritation of the respiratory tract.

Sensitization:

There is no evidence of a skin-sensitizing potential.

Potential environmental effects

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Aquatic toxicity:

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

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
907204-31-3	21.26 %	Fluxapyroxad
175013-18-0	21.26 %	pyraclostrobin
	57.48 %	Proprietary ingredients

4. 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. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

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

If on skin:

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

If in eyes:

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

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

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

5. Fire-Fighting Measures

Flash point:		No flash point - Measurement made up to the boiling point.
Autoignition:	517 °C	(Directive 92/69/EEC, A.15)
Flammability:	not highly flammable	(Directive 92/69/EEC, A.12)

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Unsuitable extinguishing media for safety reasons:

water jet

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxides, chlorides, organochloric compounds, halogenated hydrocarbons

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

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Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. 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:

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.

Cleanup:

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

Handling

General advice:

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.

Storage

General advice:

Keep away from heat. Protect from direct sunlight.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

8. Exposure Controls and Personal Protection

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

Advice on system design:

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

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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 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:

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). Take off immediately all 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:	suspension	
Odour:	faint odour, fruity	
Colour:	beige	
pH value:	approx. 6 - 8	(1 %(m), 20 °C) (pH Meter)
crystallization temperature:	approx. -6.7 °C	
Boiling point:	approx. 100 °C	
Vapour pressure:	approx. 23 hPa	(20 °C) Information applies to the solvent.
Density:	approx. 1.18 g/cm ³	(20 °C) (OECD Guideline 109)
Vapour density:	approx. 0.017	Information based on the main components.
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	approx. 35 mPa.s	(40 °C) (OECD 114)
Solubility in water:		dispersible

10. Stability and Reactivity

Conditions to avoid:

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

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

Hazardous reactions:

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

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Decomposition products:

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

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature, toxic vapours will be released.

Oxidizing properties:

not fire-propagating (Directive 2004/73/EC, A.21)

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat (female)

Value: > 50 - < 300 mg/kg (OECD Guideline 423)

Inhalation:

Type of value: LC50

Species: rat (female)

Value: 2.81 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

Dermal:

Type of value: LD50

Species: rat (male/female)

Value: > 5,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation / corrosion

Skin:

Species: rabbit

Result: Slightly irritating.

Method: OECD Guideline 404

Eye:

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization:

Buehler test

Species: guinea pig

Result: Skin sensitizing effects were not observed in animal studies.

Method: OECD Guideline 406

Repeated dose toxicity

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:

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After repeated exposure the prominent effect is local irritation. The substance may cause damage to the olfactory epithelium after repeated inhalation.

Genetic toxicity

Information on: Fluxapyroxad

No mutagenic effect was found in various tests with microorganisms and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Information on: Pyraclostrobin

No mutagenic effect was found in various tests with microorganisms and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity

Information on: Fluxapyroxad

Indication of possible carcinogenic effect in animal tests.

Information on: Pyraclostrobin

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: Fluxapyroxad

The results of animal studies gave no indication of a fertility impairing effect.

Information on: Pyraclostrobin

The results of animal studies gave no indication of a fertility impairing effect.

Development:

Information on: Fluxapyroxad

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Information on: Pyraclostrobin

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

Fish

Acute:

OECD 203; ISO 7346; 92/69/EEC, C.1 static
Oncorhynchus mykiss/LC50 (96 h): 0.032 mg/l

Aquatic invertebrates

Acute:

OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): 0.068 mg/l

Aquatic plants

Toxicity to aquatic plants:

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OECD Guideline 201 static
green algae/EC50 (72 h): 3.56 mg/l

Other adverse effects:

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:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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.

RCRA:

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments. This product is not regulated by RCRA.

14. Transport Information

Land transport

USDOT

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 PYRACLOSTROBIN, FLUXAPYROXAD)

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 PYRACLOSTROBIN, FLUXAPYROXAD)

Air transport

IATA/ICAO

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

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

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US blocked / not listed

Crop Protection TSCA, US released / exempt

OSHA hazard category: Acute target organ effects reported; Toxic - inhalation

EPCRA 311/312 (Hazard categories): Acute;

State regulations

CA Prop. 65:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

16. Other Information

Refer to product label for EPA registration number.

Recommended use: fungicide

NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 1 Special:

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.

MSDS Prepared by:

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MSDS Prepared on: 2012/11/16

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