

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 1/9
(30448183/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:	000000342244
Molecular formula:	C ₁₉ H ₁₈ Cl N ₃ O ₄
Chemical family:	strobilurine
Synonyms:	pyraclostrobin

2. Hazards Identification

Emergency overview

WARNING:
May be fatal if swallowed.
May be harmful if absorbed through skin.
May cause moderate but temporary irritation to the eyes.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of dusts/mists/vapours.
Wash thoroughly after handling.

See Product Label for additional precautionary statements.

State of matter: liquid
Colour: pure white
Odour: odourless

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:

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

Irritation / corrosion:

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

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 2/9
(30448183/SDS_CPA_US/EN)

Assessment other acute effects:

Causes temporary irritation of the respiratory tract.

Sensitization:

Skin sensitizing effects were not observed in animal studies.
There is no evidence of a skin-sensitizing potential.

Potential environmental effects

Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

Terrestrial toxicity:

With high probability not acutely harmful to terrestrial organisms.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
175013-18-0	<= 23.0 %	Pyraclostrobin
	<= 76.0 %	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:

Remove the affected individual into fresh air and keep the person calm.

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.

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

Antidote: No known specific antidote.
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	Non-flammable.
Autoignition:	not applicable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Flammability:	not determined

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 3/9
(30448183/SDS_CPA_US/EN)

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons,

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:

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

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:

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

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

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.

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 4/9
(30448183/SDS_CPA_US/EN)

Storage

General advice:

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. The authority permits and storage regulations must be observed.

Storage incompatibility:

General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

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.

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:	odourless	
Colour:	pure white	
pH value:	approx. 4.6 - 6.6	(1 %(m), 25 °C)
Freezing point:	approx. 0 °C	Information applies to the solvent.
Boiling point:	approx. 100 °C	Information applies to the solvent.
Vapour pressure:	approx. 23.3 hPa	(20 °C) Information applies to the solvent.

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 5/9
(30448183/SDS_CPA_US/EN)

Density:	approx. 1.07 g/cm ³ approx. 8.9296 Lb/USg	(20 °C) (68 °F)
Vapour density:		not determined
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	approx. 1,514 Pa.s	(approx. 20 °C)
Solubility in water:		dispersible
Molar mass:	387.82 g/mol	

10. Stability and Reactivity

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.

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

Hazardous reactions:

The product is chemically stable.

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

Decomposition products:

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

Thermal decomposition:

> 350 °C (DSC (DIN 51007))

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

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

not fire-propagating

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat (male/female)

Value: approx. 455 mg/kg (OECD Guideline 423)

Inhalation:

Type of value: LC50

Species: rat (male/female)

Value: 5.06 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)

Irritation / corrosion

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 6/9
(30448183/SDS_CPA_US/EN)

Skin:

Species: rabbit
Result: moderately 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: pyraclostrobin
Assessment of repeated dose toxicity:
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: 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: 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: Pyraclostrobin
The results of animal studies gave no indication of a fertility impairing effect.

Development:

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

Information on: pyraclostrobin
Acute:

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 7/9
(30448183/SDS_CPA_US/EN)

Cyprinus carpio/LC50 (96 h): > 0.0121 - < 0.0258 mg/l
Lepomis macrochirus/LC50 (96 h): > 0.0196 - < 0.0335 mg/l
Oncorhynchus mykiss/LC50 (96 h): 0.00616 mg/l

Aquatic invertebrates

Information on: pyraclostrobin
Acute:
Daphnia magna/EC50 (48 h): 0.0157 mg/l

Aquatic plants

Information on: pyraclostrobin
Toxicity to aquatic plants:
green algae/EC50 (96 h): > 0.843 mg/l

Non-Mammals

Information on: pyraclostrobin
Other terrestrial non-mammals:
bobwhite quail/LD50: > 2,000 mg/kg
bobwhite quail:
mallard duck/LC50: > 5,000 ppm
Honey bee/LD50: > 100 ug/bee

Not readily biodegradable (by OECD criteria).

Bioaccumulation

Information on: pyraclostrobin
OECD-Guideline 305
Rainbow trout Bioconcentration factor 379 - 507
Accumulation in organisms is not to be expected.

Environmental mobility:

Information on: pyraclostrobin
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Other adverse effects:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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.

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 8/9
(30448183/SDS_CPA_US/EN)

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

RCRA:

This product is not regulated by RCRA.

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 PYRACLOSTROBIN)

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 PYRACLOSTROBIN)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / listed

Chemical TSCA, US blocked / not listed

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

EPCRA 311/312 (Hazard categories): Acute;

Safety Data Sheet

HEADLINE SC FUNGICIDE

Revision date : 2012/11/09
Version: 2.0

Page: 9/9
(30448183/SDS_CPA_US/EN)

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:

BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2012/11/09

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET