We create chemistry

Safety Data Sheet
Headline EC Fungicide

1. Identification

Product identifier used on the label

Headline EC 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 Canada Inc.
5025 Creekbank Road
Building A, Floor 2
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Molecular formula:	C(19)H(18)N(3)O(4)CL
PCP # 27322/28959	
Synonyms:	pyraclostrobin

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Asp. Tox.	1	Aspiration hazard
Acute Tox.	3 (oral)	Acute toxicity
Acute Tox.	4 (Inhalation - mist)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation

Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Carc.	2	Carcinogenicity
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
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:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P201	Obtain special instructions before use.
P260	Do not breathe mist or vapour.
P280	Wear eye protection.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
P308 + P313	IF exposed or concerned: Get medical attention.
P330	Rinse mouth
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P391	Collect spillage.
P332 + P313	If skin irritation occurs: Get medical attention.
P331	Do NOT induce vomiting.
P337 + P313	If eye irritation persists: 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):
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 11 - 13 % dermal
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 11 - 13 % Inhalation - vapour
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 11 - 13 % Inhalation - mist

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Pyraclostrobin
CAS Number: 175013-18-0
Content (W/W): 23.6 %
Synonym: No data available.

naphthalene
CAS Number: 91-20-3
Content (W/W): < 10.0%
Synonym: Naphthalin

2-ethylhexan-1-ol
CAS Number: 104-76-7
Content (W/W): < 3.0%
Synonym: 2-Ethylhexanol

solvent naphtha
CAS Number: 64742-94-5
Content (W/W): < 75.0%
Synonym: Solvent naphtha, petroleum, heavy arom.

Naphthalene, 2-methyl-
CAS Number: 91-57-6
Content (W/W): < 20.0%
Synonym: No data available.

Proprietary surfactant blend
Content (W/W): < 5.0%
Synonym: No data available.

Naphthalene, 1-methyl-
CAS Number: 90-12-0
Content (W/W): < 10.0%
Synonym: No data available.

Toluene
CAS Number: 108-88-3

Content (W/W): < 0.3%
Synonym: Benzene, methyl-

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:
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:
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:
Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

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: Vomiting may cause aspiration pneumonia due to the ingredients.

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, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, Hydrogen chloride, carbon dioxide, nitrogen oxides, organochloric 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:
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. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

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

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
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

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.

Suitable materials for containers: High density polyethylene (HDPE), HDPE fluorinated

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. The authority permits and storage regulations must be observed. 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

naphthalene

ACGIH TLV	TWA value 10 ppm ; Skin Designation ; Danger of cutaneous absorption Skin Designation ; Danger of cutaneous absorption

solvent naphtha

ACGIH TLV	TWA value 200 mg/m3 Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures. Skin Designation Non-aerosol (total hydrocarbon vapor); Danger of cutaneous absorption

Naphthalene, 1-methyl-

ACGIH TLV	TWA value 0.5 ppm ; Skin Designation ; Danger of cutaneous absorption

Naphthalene, 2-methyl-

ACGIH TLV	TWA value 0.5 ppm ; Skin Designation ; The substance can be absorbed through the skin. Skin Designation ; Danger of cutaneous absorption

Personal protective equipment

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.

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:	liquid	
Odour:	aromatic	
Odour threshold:	Not determined since harmful by inhalation.	
Colour:	dark yellow	
pH value:	approx. 5 - 7 (1 %(m), approx. 20 °C)	
Melting point:	approx. -8 °C Information applies to the solvent.	
Boiling point:	approx. 220 - 293 °C Information applies to the solvent.	
Flash point:	approx. 98 °C	(Directive 92/69/EEC, A.9)
Flammability:	Product is combustible.	
Lower explosion limit:	approx. 0.7 %(V) Information applies to the solvent.	
Upper explosion limit:	approx. 5.6 %(V) Information applies to the solvent.	
Autoignition:	approx. 475 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	approx. 0.05 hPa (approx. 20 °C) Information applies to the solvent.	
Density:	approx. 1.06 g/cm3 (approx. 20 °C)	(OECD Guideline 109)
Vapour density:	not applicable	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, kinematic:	approx. 8.5 mm2/s (approx. 40 °C)	(OECD 114)
Solubility in water:	emulsifiable, insoluble	
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.

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 if stored and handled as prescribed/indicated.

Conditions to avoid
Avoid sources of ignition. Avoid electro-static discharge. Avoid direct sunlight.

Incompatible materials
strong bases, strong acids, 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
Assessment of acute toxicity: Ingestion may cause death unless treated promptly. Harmful by inhalation and in contact with skin.

Oral
Type of value: LD50
Species: rat (female)
Value: 260 mg/kg (OECD Guideline 423)

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 4,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Assessment other acute effects
Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Target organ: Respiratory system

Irritation / corrosion
Assessment of irritating effects: Eye contact causes irritation. 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.
Method: OECD Guideline 404

Eye
Species: rabbit
Result: Irritant.
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Buehler test
Species: guinea pig
Result: Non-sensitizing.
Method: OECD Guideline 406

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: 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.

Information on: 2-ethylhexan-1-ol
Assessment of repeated dose toxicity: No substance-specific organtoxicity was observed after repeated administration to animals.
May cause liver and kidney damage.

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

Information on: naphthalene
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was mutagenic in a mammalian cell culture test system. The substance was not mutagenic in a test with mammals. Literature data.

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

Information on: Pyraclostrobin
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity
Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

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 aquatic organisms.

Toxicity to fish
LC50 (96 h) 0.0229 mg/l, Oncorhynchus mykiss (Directive 84/449/EEC, C.1, static)

Aquatic invertebrates
EC50 (48 h) 0.046 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants
EC50 (72 h) 0.69 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

Assessment of terrestrial toxicity
With high probability not acutely harmful to terrestrial 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.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
See product label for disposal and recycling instructions.

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

14. Transport Information

Land transport
TDG

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 SOLVENT NAPHTHA, PYRACLOSTROBIN)

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 SOLVENT NAPHTHA, PYRACLOSTROBIN)

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 SOLVENT NAPHTHA, PYRACLOSTROBIN)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection	DSL, CA	released / exempt
Chemical	DSL, CA	released; restriction on quantity / not listed

Labeling requirements under Pest Control Products Act

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:
DANGER:
POISON.
Skull and crossbones inside octagon
Eye irritant.
KEEP OUT OF REACH OF CHILDREN.
CAUSES SKIN IRRITATION.
May be fatal if swallowed.
Causes eye irritation.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly after handling.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

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16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2021/01/12

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