SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

COLLIS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: crop protection product, fungicide

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Operating Division Crop Protection

Telephone: +49 621 60-27777
E-mail address: Produktinformation-Pflanzenschutz@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

| Carc. (Liver) 2 |
| Aquatic Acute 1 |
| Aquatic Chronic 1 |
H351, H400, H410, EUH401

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word:
Warning

Hazard Statement:
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statement:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

Precautionary Statements (Prevention):
P281 Use personal protective equipment as required.
P201 Obtain special instructions before use.

Precautionary Statements (Response):
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Precautionary Statements (Storage):
P405 Store locked up.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: KRESOXIM-METHYL

2.3. Other hazards
According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

crop protection product, fungicide, suspension concentrate (SC)

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-

Content (W/W): 18.2 %  
CAS Number: 188425-85-6  
Aquatic Chronic 2  
H411

kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-toloyloxyethyl)phenyl]acetate

Content (W/W): 9.1 %  
CAS Number: 143390-89-0  
EC-Number: 417-880-0  
REACH registration number: 01-2119452496-32  
INDEX-Number: 607-310-00-0  
Carc. 2  
Aquatic Acute 1  
Aquatic Chronic 1  
M-factor acute: 10  
M-factor chronic: 1  
H351, H400, H410

phenolsulfonic acid-formaldehyde-polycondensate as sodium salt

Content (W/W): < 5 %  
Eye Dam./Irrit. 2  
Aquatic Chronic 3  
H319, H412

Propane-1,2-diol
SECTION 4: First-Aid Measures

4.1. Description of first aid measures
Remove contaminated clothing.

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

On skin contact:
Wash thoroughly with soap and water.

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

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

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

5.2. Special hazards arising from the substance or mixture
carbon monoxide, hydrogen chloride, Carbon dioxide, nitrogen oxides, organochloric compounds
The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters
Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

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.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

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

6.3. Methods and material for containment and cleaning up
For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Pump off product.
Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
Ensure thorough ventilation of stores and work areas. No special measures necessary if stored and handled correctly. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

7.2. Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds.
Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:
Storage duration: 60 Months
7.3. Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

- 57-55-6: Propane-1,2-diol
- 143390-89-0: Kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-tolyloxymethyl)phenyl]acetate

8.2. Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form: suspension
Colour: white
Odour: aromatic, faint odour
Odour threshold: Not determined due to potential health hazard by inhalation.

pH value: approx. 5 - 7
(1 %(m), 20 °C)
(measured with the undiluted substance)

Crystallization temperature: approx. -3.3 °C
Boiling point: approx. 100 °C
Flash point: No flash point - Measurement made up to the boiling point.

Evaporation rate: not applicable
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.

Ignition temperature: > 600 °C
Vapour pressure: approx. 23 hPa
(20 °C)
Information applies to the solvent.

Density: approx. 1.10 g/cm³
(20 °C)

Relative vapour density (air): not applicable
Solubility in water: dispersible
(20 °C)
Partitioning coefficient n-octanol/water (log Kow): not applicable
Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic: approx. 19.6 mPa.s
(20 °C, 100 1/s)
Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

9.2. Other information

Other Information:
SECTION 10: Stability and Reactivity

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

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

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

10.4. Conditions to avoid
See MSDS section 7 - Handling and storage.

10.5. Incompatible materials
Substances to avoid:
strong bases, strong acids, strong oxidizing agents

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg
LC50 rat (by inhalation): > 5.6 mg/l 4 h
LD50 rat (dermal): > 4,000 mg/kg
No mortality was observed.

Irritation
Assessment of irritating effects:
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:
modified Buehler test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

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

Information on: kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-tolyloxymethyl)phenyl]acetate
Assessment of carcinogenicity:
Limited evidence of a carcinogenic effect.

Information on: 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-
Assessment of carcinogenicity:
In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in 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.

Developmental toxicity
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.

**Specific target organ toxicity (single exposure)**

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

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

**Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**

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: 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-*

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

**Aspiration hazard**

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

No aspiration hazard expected.

**Other relevant toxicity information**

Misuse can be harmful to health.

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**SECTION 12: Ecological Information**

12.1. Toxicity

Assessment of aquatic toxicity:
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) 2.00 mg/l, Oncorhynchus mykiss

Aquatic invertebrates:
EC50 (48 h) 0.52 mg/l, Daphnia magna
Aquatic plants:
EC50 (72 h) 4.49 mg/l (growth rate), Pseudokirchneriella subcapitata

12.2. 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.

Information on: 3-Pyridinecarboxamide, 2-chloro-N-(4′-chloro[1,1′-biphenyl]-2-yl)-
Assessment biodegradation and elimination (H2O):
| Not readily biodegradable (by OECD criteria).

Information on: kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-tolyloxymethyl)phenyl]acetate
Assessment biodegradation and elimination (H2O):
| Poorly biodegradable.

12.3. Bioaccumulative potential

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

Information on: 3-Pyridinecarboxamide, 2-chloro-N-(4′-chloro[1,1′-biphenyl]-2-yl)-
Bioaccumulation potential:
| Bioconcentration factor: 57 - 70 (28 d), Oncorhynchus mykiss
| Does not accumulate in organisms.

Information on: kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-tolyloxymethyl)phenyl]acetate
Bioaccumulation potential:
| Bioconcentration factor: 220 (28 d), Oncorhynchus mykiss (OPP 72-6 (EPA-Guideline))
| Accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 3-Pyridinecarboxamide, 2-chloro-N-(4′-chloro[1,1′-biphenyl]-2-yl)-
Assessment transport between environmental compartments:
| Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: kresoxim-methyl (ISO); methyl (E)-2-methoxyimino-[2-(o-tolyloxymethyl)phenyl]acetate
Assessment transport between environmental compartments:
Volutility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

12.5. Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

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

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

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

SECTION 14: Transport Information

Land transport

ADR
UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains KRESOXIM-METHYL, BOSCALID)
Transport hazard class(es): 9, EHS M
Packing group: III
Environmental hazards: yes
Special precautions for user: Tunnel code: E
RID
UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains KRESOXIM-METHYL, BOSCALID)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Inland waterway transport
ADN
UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains KRESOXIM-METHYL, BOSCALID)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known
Transport in inland waterway vessel: Not evaluated

Sea transport
IMDG
UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains KRESOXIM-METHYL, BOSCALID)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: Marine pollutant: YES

Air transport
IATA/ICAO
UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains KRESOXIM-METHYL, BOSCALID)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Regulation: Not evaluated
Shipment approved: Not evaluated
Pollution name: Not evaluated
Pollution category: Not evaluated
Ship Type: Not evaluated

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

To avoid risks to man and the environment, comply with the instructions for use.

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc.</td>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic</td>
</tr>
<tr>
<td>Eye Dam./Irrit.</td>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>EUH401</td>
<td>To avoid risks to human health and the environment, comply with the instructions for use.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.