

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 30.09.2015

Version: 5.0

Product: **FLEXITY**

(ID no. 30265259/SDS_CPA_IE/EN)

Date of print 30.09.2015

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

1.1. Product identifier

FLEXITY

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 A/S
Ved Stadsgraven 15
2300 København S, DENMARKContact address:BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222

E-mail address: product-safety-north@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]

Eye Dam./Irrit. 2

Aquatic Chronic 2

H317, H319, H411, 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 (GHS) in accordance with IE regulations.

Pictogram:



Signal Word:

Warning

Hazard Statement:

| | |
|--------|---|
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H411 | 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 Statements (Prevention):

| | |
|------|---|
| P264 | Wash contaminated body parts thoroughly after handling. |
| P280 | Wear eye/face protection. |

Precautionary Statements (Response):

| | |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 + P311 | If eye irritation persists: Call a POISON CENTER or doctor/physician. |
| P391 | Collect spillage. |

Precautionary Statements (Disposal):

| | |
|------|---|
| P501 | Dispose of contents/container to a licensed waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste. |
|------|---|

Labeling of special preparations (GHS):

EUH208: May produce an allergic reaction. Contains: 1,2-BENZISOTHIAZOL-3(2H)-ONE

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

Hazard determining component(s) for labelling: METRAFENONE, D-GLUCOPYRANOSE, OLIGOMERS, DECYL OCTYL GLYCOSIDE

2.3. Other hazards

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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. MixturesChemical nature

crop protection product, fungicide, suspension concentrate (SC)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

Metrafenone

Content (W/W): 25.2 %

CAS Number: 220899-03-6

Aquatic Acute 1

Aquatic Chronic 2

H400, H411

D-Glucopyranose, oligomers, decyl octyl glycosides

Content (W/W): < 50 %

CAS Number: 68515-73-1

EC-Number: 500-220-1

REACH registration number: 01-

2119488530-36

Eye Dam./Irrit. 1

H318

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

Content (W/W): < 0.05 %

CAS Number: 2634-33-5

EC-Number: 220-120-9

INDEX-Number: 613-088-00-6

Acute Tox. 4 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

Skin Sens. 1

Aquatic Acute 1

M-factor acute: 10

H318, H315, H302, H317, H400

Specific concentration limit:

Skin Sens. 1: >= 0.05 %

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Propane-1,2-diol

Content (W/W): < 10 %

CAS Number: 57-55-6

EC-Number: 200-338-0

REACH registration number: 01-

2119456809-23

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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, consult an eye specialist.

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, carbon dioxide, foam, dry powder

5.2. Special hazards arising from the substance or mixture

carbon monoxide, hydrogen bromide, Carbon dioxide, nitrogen oxides

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:

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.

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

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environmental Protection Agency if it enters surface or ground waters. Keep people and animals away.

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

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.

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.

Protect from temperatures below: 0 °C

The packed product must be protected from temperatures below the indicated one.

Protect from temperatures above: 35 °C

The packed product must be protected against exceeding the indicated temperature.

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

TWA value 470 mg/m³ ; 150 ppm (OEL (IE)), Total vapour and particulates

TWA value 10 mg/m³ (OEL (IE)), Particulate

Refer to the current schedule of occupational exposure standards published by the Irish HSA. For normal use and handling refer to the product label/leaflet. In all other cases the following apply.

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: | beige |
| Odour: | aliphatic |
| Odour threshold: | |
| pH value: | Not determined due to potential health hazard by inhalation. approx. 6 - 8 (pH Meter) (20 °C) (measured with the undiluted substance) |
| Melting point: | approx. 0 °C Information applies to the solvent. |
| Boiling point: | approx. 100 °C Information applies to the solvent. |
| Flash point: | |
| Evaporation rate: | Non-flammable. |
| Flammability: | not applicable |
| Lower explosion limit: | not flammable |
| 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: | 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. 379 °C The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. |
| Vapour pressure: | approx. 23 hPa (20 °C) Information applies to the solvent. |

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(OECD Guideline 109)

| | | |
|--|---|------------|
| Density: | approx. 1.19 g/cm ³ (20 °C) | |
| Relative vapour density (air): | not applicable | |
| Solubility in water: | dispersible | |
| Partitioning coefficient n-octanol/water (log K _{ow}): | not applicable | |
| Thermal decomposition: | 205 °C, 30 kJ/kg, (DSC (DIN 51007)) (onset temperature) 290 °C, 750 kJ/kg, (DSC (DIN 51007)) (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1. | |
| Viscosity, dynamic: | approx. 616 mPa.s (20 °C, 100 1/s) | (OECD 114) |
| Explosion hazard: | not explosive | |
| Fire promoting properties: | not fire-propagating | |

9.2. Other information

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

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 oxidizing agents, strong bases, strong acids

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:

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

Experimental/calculated data:

LD50 rat (oral): > 5,000 mg/kg (OECD Guideline 401)

No mortality was observed.

LC50 rat (by inhalation): > 3.1 mg/l 4 h (OECD Guideline 403)

No mortality was observed. Highest concentration available for testing. An aerosol with respirable particles was tested.

LD50 rat (dermal): > 5,000 mg/kg (OECD Guideline 402)

Irritation

Assessment of irritating effects:

May cause slight irritation to the eyes. Not irritating to the skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Slightly irritating. (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Buehler test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

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: Metrafenone**Assessment of carcinogenicity:*

When given in high doses, the substance was carcinogenic in animal studies. Based on its mechanism of action, a carcinogenic potential is not expected after exposure to low doses.

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. No substance-specific organotoxicity was observed after repeated administration to animals.

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.

SECTION 12: Ecological Information**12.1. Toxicity**

Assessment of aquatic toxicity:

Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

Toxicity to fish:

LC50 (96 h) > 94 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

Aquatic invertebrates:

EC50 (48 h) 20 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants:

EC50 (72 h) 21 mg/l (growth rate), *Selenastrum capricornutum* (OECD Guideline 201, static)

No observed effect concentration (72 h) 0.76 mg/l (growth rate), *Selenastrum capricornutum* (OECD Guideline 201, static)

Chronic toxicity to aquatic invertebrates:

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

*Information on: Metrafenone**Chronic toxicity to aquatic invertebrates:*

No observed effect concentration (21 d) 0.225 mg/l, *Daphnia magna* (OPP 72-4 (EPA-Guideline), static)

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: Metrafenone**Assessment biodegradation and elimination (H₂O):*

Not readily biodegradable (by OECD criteria).

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: Metrafenone**Bioaccumulation potential:*

Bioconcentration factor: 140 - 180 (42 d), *Lepomis macrochirus* (OECD Guideline 305 E)

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: Metrafenone

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.

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 METRAFENONE) |
| Transport hazard class(es): | 9, EHSM |
| Packing group: | III |
| Environmental hazards: | yes |

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Special precautions for user: Tunnel code: E

RID

UN number: UN3082
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)
 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 METRAFENONE)
 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 METRAFENONE)
 Transport hazard class(es): 9, EHSM
 Packing group: III
 Environmental hazards: yes
 Marine pollutant: YES
 Special precautions for user: None known

Air transport**IATA/ICAO**

UN number: UN 3082
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

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| | |
|-------------------------------|-------------------------------|
| | N.O.S. (contains METRAFENONE) |
| 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.

This product may be subject to the Seveso II Directive and amendments if specific threshold tonnages are exceeded.

For further medical advice Doctors should contact the National Poisons Information Centre at Beaumont Hospital, Dublin.

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:

| | |
|-------------------|---|
| Eye Dam./Irrit. | Serious eye damage/eye irritation |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic |
| Aquatic Acute | Hazardous to the aquatic environment - acute |
| Acute Tox. | Acute toxicity |
| Skin Corr./Irrit. | Skin corrosion/irritation |
| Skin Sens. | Skin sensitization |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |
| EUH401 | To avoid risks to human health and the environment, comply with the instructions for use. |
| H400 | Very toxic to aquatic life. |
| H318 | Causes serious eye damage. |
| H315 | Causes skin irritation. |
| H302 | Harmful if swallowed. |

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.