

Safety data sheet

Page: 1/15

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

1. Identification

Product identifier

Stratagem®

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

Relevant identified uses: rodenticide, biocide

Details of the supplier of the safety data sheet

Company:

BASF plc
4th and 5th Floors
2 Stockport Exchange
Railway Road, Stockport, SK1 3GG
UNITED KINGDOM

Contact address:

BASF China Ltd.
No. 1 Connaught Place , 45th Floor,
Jardine House
Central, Hongkong, CHINA

Telephone: +852 27311-222

Emergency telephone number

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

STOT RE (Blood) 2

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

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H373 May cause damage to organs (Blood) through prolonged or repeated exposure.

Precautionary Statement:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Precautionary Statements (Prevention):

P260 Do not breathe dust.

Precautionary Statements (Response):

P314 Get medical advice/attention if you feel unwell.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

Other hazards

According to UN GHS criteria

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.

This product is hazardous to mammals, including domesticated animals, and birds. Exposure of non-target animals should be prevented.

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Product: **Stratagem®**

Version: 2.1

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Biocidal product, rodenticide, Bait

Hazardous ingredients (GHS)

According to UN GHS criteria

flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

Content (W/W): 0,005 %

CAS Number: 90035-08-8

EC-Number: 421-960-0

INDEX-Number: 607-375-00-5

Acute Tox. 1 (Inhalation - dust)

Acute Tox. 1 (oral)

Acute Tox. 1 (dermal)

STOT RE (Blood) 1

Aquatic Acute 1

Aquatic Chronic 1

M-factor acute: 10

M-factor chronic: 10

H310, H330, H300, H372, H400, H410

Specific concentration limit:

STOT RE 2: >= 0,005 %

STOT RE 1: >= 0,05 %

Wheat flour

Content (W/W): < 75 %

CAS Number: 130498-22-5

EC-Number: 310-127-6

Paraffin waxes and Hydrocarbon waxes

Content (W/W): < 30 %

CAS Number: 8002-74-2

EC-Number: 232-315-6

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

4. First-Aid Measures

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.

Most important symptoms and effects, both acute and delayed

Symptoms: coagulation disorders

Increased tendency to bleed.

In severe cases, massive bleeding from internal organs may result in circulatory shock, which could prove fatal.

The onset of symptoms is delayed for up to 4 days after uptake.

Hazards: The substance / product is an anticoagulant rodenticide with a coumarin-type mode of action.

Indication of any immediate medical attention and special treatment needed

Treatment: Symptomatic treatment (decontamination, vital functions).

Antidote: Vitamin K1 preparation as antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

foam, water spray, dry powder

Unsuitable extinguishing media for safety reasons:

carbon dioxide

Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, Hydrogen fluoride, Hydrogen chloride, nitrogen oxides, halogenated compounds, metal oxides, silica compounds, cyanides, sulfur oxides

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

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.

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. 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

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. 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.

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.

If dead and/or dying rats or mice are found during and after the control program, these must be cleared away immediately in order to avoid secondary poisoning phenomena. Do not apply in the open – cover bait points or use bait boxes.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds. Odour-sensitive: Segregate from products releasing odours. Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Protect from temperatures above: 30 °C

BASF Safety data sheet according to UN GHS 4th rev.
Date / Revised: 27.05.2020
Product: **Stratagem®**

Version: 2.1

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

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.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

8002-74-2: Paraffin waxes and Hydrocarbon waxes
130498-22-5: Wheat flour

Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

Hand protection:

Protective gloves (EN 374) are required for the safe handling of this product and are also recommended for protection against rodent-borne diseases.

e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other
Manufacturer's directions for use should be observed because of great diversity of types.

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

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form: solid, blocks

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

Colour:	blue	
Odour:	almost odourless, faint odour, fresh cut grass	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 4 - 7 (20 °C)	
Melting point:	>= 64 °C The statements are based on the properties of the individual components.	
Boiling point:	> 300 °C The statements are based on the properties of the individual components.	
Flash point:	not applicable, the product is a solid	
Evaporation rate:	not applicable	
Flammability:	not flammable	(Directive 92/69/EEC, A.10)
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.	
Vapour pressure:	not applicable	
Density:	approx. 1,27 g/cm ³ (20 °C)	(OECD Guideline 109)
Relative vapour density (air):	not applicable	
Solubility in water:	insoluble	
Partitioning coefficient n-octanol/water (log K _{ow}):	not applicable	
Self ignition:	Temperature: 267 °C	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:		
Explosion hazard:	not applicable, the product is a solid Based on the chemical structure there is no indication of explosive properties.	(Directive 84/449/EEC, A.14)

BASF Safety data sheet according to UN GHS 4th rev.
Date / Revised: 27.05.2020
Product: **Stratagem®**

Version: 2.1

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Other information

Self heating ability: It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.

10. Stability and Reactivity

Reactivity

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

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

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

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

11. Toxicological Information

Information on toxicological effects

Acute toxicity

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

Experimental/calculated data:

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

LD50 rat (oral): > 5.000 mg/kg

LC50 (by inhalation):

Not inhalable due to the physico-chemical properties of the product.

LD50 rat (dermal): > 5.000 mg/kg

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 eyes. Not irritating to the skin.

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. The results of various animal studies gave no indication of a carcinogenic effect.

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:

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

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: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

*Assessment of repeated dose toxicity:**Repeated exposure to small quantities may affect certain organs. Damages the coagulation system.*

Aspiration hazard

No aspiration hazard expected.

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

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

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

Information on: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

Toxicity to fish:

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

LC50 (96 h) 0,067 mg/l, Oncorhynchus mykiss (OECD Guideline 203)
-----*Information on: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin**Aquatic invertebrates:**EC50 (48 h) 0,17 mg/l, Daphnia magna (OECD Guideline 202, part 1)*
-----*Information on: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin**Aquatic plants:**EC50 (72 h) > 18,2 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)**EC10 (72 h) > 18,2 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)*
-----*Information on: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin**Chronic toxicity to fish:**No observed effect concentration (28 d) < 0,1 mg/l, Brachydanio rerio (other, Flow through.)*

Assessment of terrestrial toxicity:

Hazardous to birds and mammals.

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: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin**Assessment biodegradation and elimination (H₂O):**Not readily biodegradable (by OECD criteria).*

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: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

BASF Safety data sheet according to UN GHS 4th rev.
Date / Revised: 27.05.2020
Product: **Stratagem®**

Version: 2.1

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

Bioaccumulation potential:
Bioconcentration factor: > 2.000
Accumulation in organisms is expected.

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: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

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.

Results of PBT and vPvB assessment

The product contains a potential PBT substance.

The product contains a potential vPvB substance.

Information on: flocoumafen (ISO); reaction mass of: cis-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin; trans-4-hydroxy-3-(1,2,3,4-tetrahydro-3-(4-(4-trifluoromethylbenzyloxy)phenyl)-1-naphthyl)coumarin

Fulfills the criteria for PBT and vPvB

Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:
Must not be discharged into the environment.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

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

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

IMDG

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport**IATA/ICAO**

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

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

STOT RE	Specific target organ toxicity — repeated exposure
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 27.05.2020

Version: 2.1

Product: **Stratagem®**

(ID no. 30511730/SDS_GEN_00/EN)

Date of print 21.04.2023

H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H300	Fatal if swallowed.
H372	Causes damage to organs (Blood) through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. 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.