1. Identification

Product identifier

**Ridak® Gold**

**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 SE
67056 Ludwigshafen
GERMANY
Operating Division Crop Protection

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

**Emergency telephone number**

International emergency 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.
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/container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: DIFENACOUM

Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

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

3. Composition/Information on Ingredients

Substances
Not applicable

**Mixtures**

**Chemical nature**

Biocidal product, rodenticide, Bait

**Hazardous ingredients (GHS)**

According to UN GHS criteria

<table>
<thead>
<tr>
<th>3-(3-biphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum</th>
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</table>

**Specific concentration limit:**

- STOT RE 1: \( \geq 0.02 \% \)
- STOT RE 2: \( \geq 0.002 \% \)

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<td>CAS Number: 130498-22-5</td>
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<td>EC-Number: 310-127-6</td>
</tr>
</tbody>
</table>

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

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### 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.

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**5. Fire-Fighting Measures**

**Extinguishing media**
Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide, water jet

**Special hazards arising from the substance or mixture**
carbon monoxide, Carbon dioxide, nitrogen 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:
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**
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. Wear suitable protective equipment.

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

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.

Do not apply in the open – cover bait points or use bait boxes. 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.

**Protection against fire and explosion:**
Dust can form an explosive mixture with air. Avoid dust formation. 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: Protect against moisture. Keep away from heat. Protect from direct sunlight.

**Storage stability:**
Storage duration: 24 Months
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

130498-22-5: Wheat flour
130498-22-5: Cut wheat

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:
Required when there is a risk of eye contact., 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, granules
Colour: blue-green
Odour: odourless
Odour threshold: not applicable, odour not perceivable

pH value: not soluble, The statements are based on the properties of the individual components.

Melting point: not applicable

Boiling point: not applicable

Flash point: not applicable

Evaporation rate: not applicable

Flammability: not flammable

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. 0.83 g/cm³ (20 °C)

Relative vapour density (air): not applicable

Solubility in water: not soluble

Information on: 3-(3-biphenyl-4-yl-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum

Partitioning coefficient n-octanol/water (log Kow): 7.6 (20 °C)

Self ignition: not self-igniting

Information based on the main components.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic: not applicable, the product is a solid

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

Other information
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 MSDS 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 the properties of the individual components.

Experimental/calculated data:
LD50 rat (oral): 36,000 mg/kg
LC50 rat (by inhalation): 72,92 - 116,96 mg/l 4 h
LD50 rat (dermal): 1,260,000 mg/kg

Irritation
Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes. The product has not been tested. The statement has been derived from the properties of the individual components.

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

Respiratory/Skin sensitization
Assessment of sensitization:
There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:
guinea pig: Skin sensitizing effects were not observed in animal studies.

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

Carcinogenicity
Assessment of carcinogenicity:
The results of various animal studies gave no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

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

Developmental toxicity
Assessment of teratogenicity:
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from the properties of the individual components.

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.
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-(3-biphenyl-4-yl-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
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: 3-(3-biphenyl-4-yl-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
Toxicity to fish:
LC50 (96 h) 0,064 mg/l, Oncorhynchus mykiss (Directive 92/69/EEC, C.1)

Information on: 3-(3-biphenyl-4-yl-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
Aquatic invertebrates:
EC50 (48 h) 0,52 mg/l, Daphnia magna (Directive 92/69/EEC, C.2)

Information on: 3-(3-biphenyl-4-yl-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
Aquatic plants:
EC50 (72 h) 0,8 mg/l (growth rate), Selenastrum capricornutum (Guideline 92/69/EEC, C.3)

No observed effect concentration (72 h) 0,25 mg/l (growth rate), Pseudokirchneriella subcapitata
(Guideline 92/69/EEC, C.3)
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: 3-(3-biphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
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: 3-(3-biphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.*

**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-(3-biphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
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: 3-(3-biphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin; difenacoum
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:
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

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<td>Packing group:</td>
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<td>Environmental hazards:</td>
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<td>Special precautions for user</td>
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Inland waterway transport
ADN

| 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
IMDG

| 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

| 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 |

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

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

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

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

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

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

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

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## 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
- **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.