

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name **BROCUM PARAFFINATO**

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

1.2.1 Relevant identified uses **Rodenticide bait**
Biocide for professional and non-professional use
1.2.2 Uses advised against **Use only for the purposes specified in detail in section 1.2.1**

1.3. Details of the supplier of the safety data sheet

Manufacturer / Supplier **COLKIM S.r.l.**
Street Address / P.O. Box **Via Piemonte, 50**
Country ID/Postcode/Place **40064 OZZANO EMILIA (BO)**
Italia

Telephone number **tel. +39 051 / 799445**
fax +39 051 / 797555

e-mail address of the competent person responsible for the Safety Data Sheet **info@colkim.it**
Product distribution by **COLKIM S.r.l. - Via Piemonte, 50 - 40064 OZZANO EMILIA (BO)**

1.4. Emergency telephone number

For urgent inquiries refer to **Company: +39 051 / 799445 (office hours)**
ANTIPOISON CENTER Hospital NIGUARDA (Milano): +39 02 / 66101029

Type of registration: Biocidal product
Authorization of the Ministry of Health n. IT/2014/00216/AUT 17/06/2014

2. Hazards identification.

2.1. Classification of the substance or mixture.

2.1.1 Classification according to EC Regulation 1272/2008 [CLP]: not classified

The product is not classified as hazardous according to EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). However, since the product contains hazardous substances in concentrations such as to be declared in section no. 3, it requires a safety data sheet with appropriate information, compliant to EC Regulation 1907/2006 and subsequent amendments.

2.2. Label elements.

Labelling according to EC Regulation 1272/2008 (CLP)

Hazard pictograms: None.

Signal word: None

Hazard statements (H): None

Precautionary statements (P):

P102 Keep out of reach of children
P262 Do not get in eyes, on skin, or on clothing.
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P405 Store locked up.
Contains: **BRODIFACOUM**

Safety data sheet available on request for professional users.

2.3. Other hazards.

Information not available.

3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Common name	IUPAC name	CAS number	EC number	w/w (%)	Classification
Brodifacoum	3-[3-[4-(4-Bromophenyl)phenyl]-1,2,3,4-tetrahydronaphthalen-1-yl]-2-hydroxychromen-4-one	56073-10-0	259-980-5	0,005	Acute Tox cat 1 H310 Acute Tox cat 2 H300 Stot RE 1 H372 Tox acq Acute1 H400 Tox acq Chron 1 H410
Denatonio Benzoato	Fenilmetil-[2- [(2,6-dimetilfenil)ammino]- 2-ossoetil]-dietilammonio benzoato	3734-33-6	223-095-2	0,001	Acute Tox. 4 H302 Skin Irrit. 2 H315 Eye Dam.1 H318 Acute Tox. 4 H332 Aquatic Chronic. 3 H412
Calcium hydroxide	Calcium dihydroxide	1305-62-0	-	0,1-0,5	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Dam. 1 H318
Sorbic Acid	(2E,4E)-hexa-2,4-dienoic acid	110-44-1	203-768-7	0,1-0,5	Skin Irrit.2 H315; Eye.Irrit.2 H319; STOT SE 3 H335;

The full wording of the hazard (H) phrases is given in section 16 of the sheet.

4. First aid measures.

4.1. Description of first aid measures.

Remove contaminated clothing

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

On skin contact: Wash thoroughly with soap and water.

If inhaled: Keep patient calm, remove to fresh air

On ingestion: Call a doctor immediately. Do not induce vomiting or give anything that is not expressly permitted by your doctor.

4.2. Most important symptoms and effects, both acute and delayed.

Symptoms: coagulation disorder
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.

4.3. Indication of any immediate medical attention and special treatment needed.

Treatment: Symptomatic treatment (decontamination, vital functions).

Antidote: Vitamin K1 preparation as antidote.

5. Firefighting measures.

BROCUM PARAFFINATO**5.1. Extinguishing media.**

SUITABLE EXTINGUISHING MEDIA

The extinction equipment should be of the conventional foam, powder and nebulized water.

NOT SUITABLE EXTINGUISHING MEDIA

None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Avoid breathing combustion products (carbon oxide, toxic pyrolysis products, etc.).

5.3. Advice for firefighters.

General information

Cool by spraying with water the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention. Collect extinguishing water must not be discharged into drains. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

EQUIPMENT

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with straps around arms, legs and waist), work gloves (fireproof, cut proof and anti-static), a overpressure mask with facemask covering the whole of the face or the self-respirator (self-protector) in the event of large quantities of smoke.

6. Accidental release measures.**6.1. Personal precautions, protective equipment and emergency procedures.**

Eliminate all sources of ignition (cigarettes, flames, sparks, etc..) Or from the air in which the leak occurred. In the case of solid product avoid the formation of dust by spraying with water if there are no contraindications. In the case of airborne dust fumes or respiratory protection. Stop leak if safe to do so. Do not handle damaged containers or the leaked product before wearing the proper protective equipment. For information on risks for the environmental and health, respiratory tract protection, ventilation and individual protective measures, refer to the other sections of this sheet. These guidelines apply to both workers to working for the emergency interventions.

6.2. Environmental precautions.

Prevent product from entering drains, surface water, ground water and neighboring areas.

6.3. Methods and material for containment and cleaning up.

Collect the majority of the spilled material and deposit it in containers for disposal. Eliminate the rest using jets of water if there are no contraindications. Disposal of contaminated material must be done in accordance with the provisions of section 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage.**7.1. Precautions for safe handling.**

No special measures necessary if stored and handled correctly. Provide good ventilation and air circulation in warehouses and the workplace. Do not eat, drink or smoke during use. Before breaks and at the end of work, wash hands and face. If during or after the control action there are dead rats or mice, they must be removed immediately to avoid phenomena of secondary intoxication. Baits must be placed to minimize the possibility of ingestion by other non-targeted animals. Do not use outdoors - cover the use of bait or bait boxes. Avoid direct contact with the product..

7.2. Conditions for safe storage, including any incompatibilities.

Keep the product in a fresh and well aerated place. Keep away from children and domestic animals. Keep away from sources of ignition. Keep away from foods and animal feeds.

Sensitive to odors: keep away from products that release odor.

7.3. Specific end use(s).

Rodenticide bait.

8. Exposure controls/personal protection.

BROCUM PARAFFINATO**8.1. Control parameters.**

Use the product following this safety data sheet.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure good ventilation at the workplace through effective local aspiration. The personal protective equipment must comply with the regulations in force indicated below.

HAND PROTECTION

Protect your hands with work gloves, category III (ref. Directive 89/686/EEC and standard EN 374) such as those in PVA, butyl, fluoroelastomer or equivalent.

Final selection of glove material must be considered work: degradation, breakage times and permeation. In the case of preparations the Work glove resistance should be checked before use, as it can be unpredictable. The gloves have a time limit depends on the duration of exposure.

EYE PROTECTION

Wear hood visor or protective visor together with airtight goggles (ref. standard EN 166).

SKIN PROTECTION

Wear long-sleeved overalls and safety footwear for professional use category III ((ref. Directive 89/686/EEC and standard EN 344).

Wash with soap and water after removing protective clothing.

RESPIRATORY PROTECTION

In case of exceeding the threshold value (if available) of one or more of the substances present in the product, reported daily exposure in the workplace or to a fraction established by the company's prevention and protection, wear a filter semi facial type FFP3 (ref. EN 141/EN 143).

The use of respiratory protective equipment, such as masks of the type described above, it is necessary in the absence of technical measures limiting the worker exposure. The protection provided by masks is in any case limited.

In the case where the substance in question is odorless or its olfactory threshold is higher than the relative exposure limit and in case of emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

Provide a system for eye wash and emergency shower.

Should there be a risk of exposure to splashes or squirts during work performed, there should be an adequate protection of mucous membranes (mouth, nose, eyes) in order to prevent accidental absorption.

9. Physical and chemical properties.**9.1. Information on basic physical and chemical properties.**

Appearance	Solid
Colour	Green
Odour	sweet
Odour threshold..	Not available.
pH.	Not available.
Melting or freezing point.	Not applicable.
Initial boiling point.	Not applicable.
Boiling range.	Not available.
Flash point.	Not applicable.
Evaporation rate	Not applicable.
Flammability of solids and gases	Not available.
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not applicable.
Vapour density	Not applicable.
Specific gravity	1,1 mg/ml
Solubility	Insoluble in water.
Partition coefficient: n-octanol/water:	Not available.
Ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Reactive properties	Not available.

9.2. Other information.

Not available.

10. Stability and reactivity.**10.1. Reactivity.**

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability.

The product is stable at the normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

Under conditions of normal use and storage is not hazardous reactions are foreseeable.

10.4. Conditions to avoid.

None in particular. Follow the usual precautions with chemicals.

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

When heated or in the event of fire may release gases and vapors potentially dangerous to health.

11. Toxicological information.

No episodes of damage to health due to exposure to the product.

The preparation may, in sensitive people, cause mild health effects by inhalation and / or cutaneous absorption and / or contact with eyes and / or ingestion. It is recommended to operate within the rules of good industrial hygiene

11.1. Information on toxicological effects.

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single inhalation. Virtually nontoxic after a single skin contact. The product has not been tested.

The statement has been derived from the properties of individual components.

DENATONIUM BENZOATE

LD50 (Oral) rat: 584 mg/Kg

LD50 (Oral) rabbit: 508 mg/Kg

BRODIFACOUM

LD50 (Oral) rat: 0,4 mg/kg

LD50 (Dermal) rat: 3,16 mg/kg

LC50 (Inhaled) rat: 3,05 µg/l 4 h

Misuse can be harmful to your health.

12. Ecological information.

Use according to good working practices, avoiding disposal in the environment. Inform the relevant authorities if the product has reach waterways or sewers or contaminate soil or vegetation.

12.1. Toxicity.

BRODIFACOUM

Fish (*Oncorhynchus mykiss*) LC50 (96 h) : 0,04 mg/l

Aquatic Invertebrates (*Daphnia magna*) LC50 (48 h) : 0,25 mg/l

Aquatic Invertebrates (*Eiseniafoetida*) LC50 (48 h) : 994 mg/Kg

Aquatic plants (*Selenastrum capricornutum*) ErC50 : 0,04 mg/l

microorganism

Pseudomonas putida

EC10<0,25 mg/L

Activated sludge

EC10<0,058 mg/L

Birds

Acute Toxicity *LD50 = 0,31 mg/lg pc (Mallard Duck)*
Diet Toxicity *CL50 = 0,72 mk/kg (Laughing Gull)*
Reproduction Toxicity *NOEC = 0,0038 mg/kg*

Assessment of terrestrial toxicity: Hazardous to birds and mammals.

DENATONIUM BENZOATE

Fish LC50 (96h) : >1000 mg/L
 Shrimp LC50 (96h) : > 400 mg/l
 Aquatic Invertebrates (*Daphnia magna*) EC50 (48h) : 13 mg/L

12.2. Persistence and degradability.**BRODIFACOUM**

- not readily biodegradable
- not degradable in anaerobic conditions
- hydrolysis half-life: stable 1 year at pH 4, 7 and 9
- photolysis half-lives 0,083 days.
- Readily degrades in sewage sludge and sediments because of its high LogKow and poor water solubility

12.3. Bioaccumulative potential.

BRODIFACOUM: BCF_{fish} = 35134 . calculated in according to TGD eq, 75 using log Kow = 6,12 (estimated from Koc measurement)

12.4. Mobility in soil.

BRODIFACOUM: Koc=9155l/Kg DT50 soil 157 days(20°C), 298(12°C)

12.5. Results of PBT and vPvB assessment.**BRODIFACOUM**

potential substance PBT

12.6. Other adverse effects.

Information not available.

13. Disposal considerations.**13.1. Waste treatment methods.**

The preparation is not suitable for disposal in landfills and / or waste disposal public channels, natural streams or rivers. recover if possible, or start to incineration plants. The preparation as such should be considered special hazardous waste. the correct classification is an obligation of the producer of the waste. The codes ERC recommended (which may vary in function of the use) are: 07 04 13* (solid wastes containing dangerous substances), or 16 03 05* (waste containing dangerous substances). The containers, even if completely empty, must not be disposed of properly and should be subjected to a proper waste disposal before being sent for disposal. If they contain residues must be classified, stored and sent to a suitable facility treatment in accordance with applicable local and national regulations. For non-professional use completely empty the container can be removed with household waste.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations. The codes ERC recommended (which may vary in function of the use): 150110* (packaging containing residues of or contaminated by dangerous substances).

14. Transport information.

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

15. Regulatory information.

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

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

None.

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Healthcare controls.

Information not available.

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the safety data sheet.

Acute Tox 1	Acute toxicity, category 1
Acute Tox 2	Acute toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
Eye Dam 1	Serious eye damage, Category 1
Skin Irrit. 2	Skin irritation, category 2
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H318	Causes severe eye damage.
H330	Fatal if inhaled
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. The Merck Index. - 10th Edition
8. Handling Chemical Safety
9. Niosh - Registry of Toxic Effects of Chemical Substances
10. INRS - Fiche Toxicologique (toxicological sheet)
11. Patty - Industrial Hygiene and Toxicology
12. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
13. ECHA website
14. Legislative Decree February 25, 2000, n. 174 "Implementation of Directive 98/8/EC concerning the placing of biocidal products on the market."
15. Consolidated Environmental 152/06 and subsequent amendments and additions.
16. Consolidated Safety, Decree 81/08 and subsequent amendments and additions.
17. Commission Regulation (EU) 528/2012 concerning the making available on the market and use of biocidal products.

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product .

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Changes to previous review:

The following sections were modified:

1 / 2 / 3 / 4 / 11 / 12 / 16