

SAFETY DATA SHEET (SDS)

TITLE: **BRODIFACOUM 0.005% PELLETS**

1.0 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Product Name : CIBA BRODIFACOUM PL
Common Name : Brodifacoum 0.005% Pellets
CAS No. : 56073-10-0
EC No. : 259-980-5
Index Number : N/A
REACH registration No. : N/A

1.2 Relevant identified uses of the substance and uses advised against:

Ready for use rodenticide.

1.1 Details of the Manufacturer / Supplier of the safety data sheet:

Supplier CIBA AGRIPHARMA SARL
78 Boulevard Haussmann
75008 Paris , France
Tel Tel: +33 6 51 39 90 00
E-mail administration@ciba- agripharma.com
Webpage www. ciba- agripharma.com

1.2 Emergency Phone Number (24 hours)

+33 6 51 39 90 00

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

2.1.1 Classification:

The substance is classified as following according to REGULATION (EC) No 1272/2008 (CLP).

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

1272/2008/EU	
Pictograms / Signal word code (s)	Hazard Statement Code (s)
NA	NA

For full text of H-phrases: see section 2.2.1

2.2 Label elements

2.2.1 According to 1272/2008/EU REGULATION

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

2.3 Other hazards

May form flammable dust-air mixture

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

Substance Name / CAS No	% w/w	Hazard Statements (1272/2008/EC)
Brodifacoum / 56073-10-0	0.005	H300, H310, H317, H330, H372, H400, H410

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 General information

Have the product container, label or Material Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment

4.1.2 In case of inhalation

Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.

4.1.3 In case of skin contact

Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.

4.1.4 In case of eyes contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required

4.1.5 In case of ingestion

Take victim immediately to hospital.
Do NOT induce vomiting.

4.1.6 Notes for the doctor

This product contains anticoagulants with an effect similar to warfarin in that they act by interfering with the synthesis of prothrombin. The specific measure of effect is the prothrombin time. Note this may not become prolonged until 12-18 hours after ingestion. The specific antidote is vitamin K1 (Phytomenandione). Antidote must be administered under medical supervision. Initially, antidote should be given by injection (10-20mg, or 0.25mg/kg for children), by slow intravenous infusion at a rate not exceeding 1mg/minute. In severe cases the use of fresh frozen plasma may be required. Maintenance treatment is given orally (40mg/day in divided doses for adults; up to 20mg/day in divided doses for children). The prothrombin time and the haemoglobin should be monitored. Patients should be kept under medical supervision until the prothrombin time has been normal for 3 consecutive days. Oral treatment may need continuing for several months (20mg/day in divided doses for adults and up to 20mg/day in divided doses for children). (For animal cases the dose is 2-5mg/kg).

5.0 FIRE – FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Extinguishing media - small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Extinguishing media - large fires Alcohol-resistant foam or Water spray Do not use a solid water stream as it may scatter and spread fire.
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products	:	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.
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5.3 Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus.
Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Protective equipment	:	Refer to protective measures listed in sections 7 and 8.
Emergency procedures	:	Refer to protective measures listed in sections 7 and 8. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system .

6.3 Methods and material for containment and cleaning up

6.3.1 For containment and cleaning up

Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Do not create a powder cloud by using a brush or compressed air.

Clean contaminated surface thoroughly.

If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

No special protective measures against fire required.

Avoid contact with skin and eyes.

When using do not eat, drink or smoke. For personal protection see section 8

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep out of the reach of children.

Keep away from food, drink and animal feedingstuffs

7.3 Specific and use(s)

Recommendations : N/A

Industrial sector specific solutions : N/A

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational exposure limits

Exposure limit(s) 0.002 mg/m³
Type of exposure limit 8 h TWA

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne dust is generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice

8.2.2 Personal protection equipment

The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

8.2.3 Eye protection

Eye protection is not usually required.

Follow any site specific eye protection policies

8.2.4 Skin Protection

No special protective equipment required.

Select skin and body protection based on the physical job requirements

8.2.5 Respiratory protection

No personal respiratory protective equipment normally required.

A particulate filter respirator may be necessary until effective technical measures are installed.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Solid pellets
Colour	:	Blue
Odour	:	Slight
Odour threshold	:	N/A

9.2 Other information

Fat solubility (solvent-oil to be specified) etc	:	N/A
Bulk Density	:	0.85g/cm ³
Dissociation constant in water (pKa)	:	N/A
Oxidation-reduction Potential	:	N/A

10.0 STABILITY AND RELIABILITY

10.1 Reactivity

Not available

10.2 Chemical stability

Is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

Not available

10.4 Conditions to avoid

Heat and sparks.

10.5 Incompatible materials

Not available

10.6 Hazardous decomposition products

None under normal conditions of storage and use.

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute inhalation toxicity : Acute toxicity estimate , > 5.0 mg/l Derived from components.

Acute dermal toxicity : Acute toxicity estimate rat, > 5,000 mg/kg Derived from components.

Skin corrosion/irritation : rabbit: Non-irritating Derived from components.

Serious eye damage/eye irritation : rabbit: Non-irritating Derived from component

Respiratory or skin sensitisation brodifacoum : guinea pig: A skin sensitizer in animal tests.

Germ cell mutagenicity brodifacoum : Did not show mutagenic effects in animal experiments.

Carcinogenicity brodifacoum : Did not show carcinogenic effects in animal experiments.

Teratogenicity brodifacoum : Did not show teratogenic effects in animal experiments.

Reproductive toxicity brodifacoum : Did not show reproductive toxicity effects in animal experiments.

STOT - repeated exposure brodifacoum : Causes damage to organs through prolonged or repeated exposure.

Further information brodifacoum : Excessive exposure slows blood clotting time and can cause bleeding, shock and death.

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 *Oncorhynchus mykiss* (rainbow trout), > 100 mg/l , 96 h Derived from components.

Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (Water flea), > 100 mg/l , 48 h Derived from components.

Toxicity to aquatic plants : EC50 *Pseudokirchneriella subcapitata* (green algae), > 100 mg/l , 72 h Derived from components.

12.2 Persistence and degradability

Stability in water

Brodifacoum : Degradation half life: ca. 300 d
Persistent in water.

Stability in soil

Brodifacoum : Degradation half life: 157 d
Not persistent in soil.

12.3 Mobility in soil

Brodifacoum has low mobility in soil

12.4 Result of PBT & vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.5 Other adverse effects

None known.

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:

Do not contaminate ponds, waterways or ditches with chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging :

Empty remaining contents.

Triple rinse containers.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Do not re-use empty containers.

14.0 TRANSPORT INFORMATION

14.1 Land transport (ADR/RID/GGVSE)

NOT DANGEROUS GOODS

UN-No	: Not Applicable
Proper shipping name	: Not Applicable
Class (es)	: Not Applicable
Classification Code (s)	: Not Applicable
Packing group	: Not Applicable
Hazard label(s)	: Not Applicable

14.2 Sea transport (IMDG-Code/GGVSee)

NOT DANGEROUS GOODS

UN-No	: Not Applicable
Proper shipping name	: Not Applicable
Class(es)	: Not Applicable
Subsidiary Risks	: Not Applicable
Packing group	: Not Applicable
Marine Pollutant	: Not Applicable
Label (s)	: Not Applicable

14.3 Air transport (ICAO-IATA/DGR)

NOT DANGEROUS GOODS

UN-No	: Not Applicable
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Proper shipping name	:	Not Applicable
Class(es)	:	Not Applicable
Packing group	:	Not Applicable
Label (s)	:	Not Applicable

15.0 REGULATORY INFORMATION

15.1 Hazard and Precautionary statements in accordance with the regulation 1272/2008/EC

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

GHS-Labeling

Remarks : Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

Pictograms and Signal Word Code(s) See section 2.1.1 and 2.2.1

Hazard Statement Code(s) See section 2.1.1 and 2.2.1

16.0 OTHER INFORMATION

16.1 Hazard statements mentioned in section 3 in accordance with the regulation 1272/2008/EC:

H300	:	Fatal if swallowed
H310	:	Fatal in contact with skin.
H317	:	May cause an allergic skin reaction.
H330	:	Fatal if inhaled.
H372	:	Causes damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life, May cause long lasting harmful effects to aquatic life.

16.2 Further Information

The information contained herein relates only to the specified material identified. CIBA AGRIPHARMA, believes that such information is accurate and reliable as of the data of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. CIBA AGRIPHARMA urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

This material safety data sheet adopts the Regulations 1272/2008 (CLP) and 453/2010 (REACH).