1 Identification of the preparation and the supplying Company

1.1 Bromag (UK-2015-0932)
1.2 A ready to use cereal based rodenticide for professionals indoors
1.3 Killgerm Chemicals Ltd, Wakefield Road, Ossett, West Yorkshire, WF5 9AJ.
Tel: +44 (0)1924 268450 Fax: (0)1924 265033 Email: technical@Killgerm.com
1.4 Emergency telephones. National Poisons Information Service 0870 600 6266.
Killgerm Chemicals Ltd, 01924 268452 (Office hours)

2 Hazards identification

2.1. Classification of the substance or mixture
Not classified as hazardous according to Regulation (EC) 1272/2008

2.2. Label elements

precautionary statements are as follows

P102 keep out of reach of children
P103 Read the label before use.
P280 Wear protective gloves and clothing
P301+310 If SWALLOWED: Immediately call a POISON CENTER or doctor/physician

. To avoid risk to man and the environment comply with the instructions for use. Safety data sheet available for professional user on request.

2.3. Other hazard
None expected under normal conditions of use. This product contains Bromadiolone, an indirect anticoagulant. Any signs of poisoning are unlikely to occur until 12-18 hours after ingestion. Thereafter, they will develop progressively and may rapidly appear.
Clinical signs result from an increased bleeding tendency and include: an increase in prothrombin time, bruising easily with occasional gum bleeding, blood in the stool or urine, excessive bleeding from minor cuts and abrasions, pale mouth and cold gums, anorexia and general weakness. More severe cases of poisoning include haemorrhage (usually internal) and shock.
This product is hazardous to mammals including domesticated animals, and birds if ingested.
Exposure of non-target animals should be prevented.

3 Composition and information on ingredients

3.2. Mixtures
Hazardous Components in Product

Ingredient Name	Classification	Concentration	R Phrases	H Phrases
Bromadiolone Technical Material CAS No: 28772-56-7	T+.N Acute Tox 1 Reproductive tox 1A STOT RE1 AcuteAquatic 1 Chronic Aquatic 1	0.005% w/w	R27/28 R51/53	H301,H311,H330,H372 H412

Bitrex CAS Number: 3734-33-6	Xn. Xi Acute Tox category. 4, Skin Irrit category. 2, Eye Dam category. 1, Aquatic Chronic category 3,	<2.5% w/w	R20/22 R38 R41 R52/53	H302,H315,H332,H318 H412

See section 16 for full text of R-phrases, H phrases and hazard classification of ingredients.

4 First Aid measures

4.1. Description of first aid measures:

Ingestion (swallowing): DO NOT cause vomiting, Keep the patient at rest and maintain body temperature Check breathing. If necessary, artificial respiration If the person is unconscious, place him on his side with his head lower than the rest of his body and knees half bent.

Inhalation: Unlikely route of exposure. Remove from exposure to fresh air. Obtain medical advice if symptoms develop.

Skin contact: wash the skin with abundant soap and water, without rubbing

Eye contact: wash eyes with abundant water for at least 15 minutes. Do not forget to remove contact lenses

4.2. **Most important symptoms and effects, both acute and delayed:**
Bromadiolone is an anticoagulant which may produce bleeding; the onset of bleeding may be delayed for several days after exposure. If there is no active bleeding the INR (prothrombin time) should be measured on presentation and 48-72 hours after exposure. If the INR is greater than 4, administer Vitamin K1 (phytomenadione) 5-10 mg by slow intravenous injection (100 µg/kg body weight for a child). Treatment with phytomenadione (orally or intravenously) may be required for several weeks. The advice of the National Poisons Information Service (http://www.npis.org/) should be sought, particularly if active bleeding occurs.

Take the person out of the contaminated zone and remove stained or splashed clothing
For eye contact: For skin contact:
If ingested, **Transfer the poison victim to a hospital and take the label or package whenever possible. DO NOT LEAVE THE POISON VICTIM ALONE AT ANY TIME**

4.3. Indication of any immediate medical attention and special treatment needed …See 4.2

5 Fire-fighting measures

5.1. Extinguishing media
Use water spray, foam, dry chemical or carbon dioxide. Cool the smouldering material with water spray to minimise the possibility of re-ignition. Keep containers and surroundings cool with water spray.

5.2. Special hazards arising from the substance or mixture:

This product is non-flammable, but combustible. May produce toxic fumes of carbon monoxide if involved in a fire.

5.3. Advice for fire-fighters
Wear self-contained breathing apparatus

6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:
Personnel dealing with accidental spills and release of the mixture should wear personal protective equipment described in section 8 under “spillage”

6.2. Environmental precautions:
In case of accidental spills keep away from drains, surface and ground water.

6.3. Methods and material for containment and cleaning up:
Sweep up spilled material carefully. Avoid raising dust. Place in marked receptacle ready for disposal. Contact supplier for advice on disposal. See also section 13

6.4. Reference to other sections:
Refer to section 8 and 13 for additional information.

7 Handling and storage

7.1. Precautions for safe handling
This product is subject to the Food and Environmental Protection Act 1985, and the Control of Pesticides Regulations 1986 made under it. The product must be used in accordance with the product label. FOR USE ONLY BY PROFESSIONAL OPERATORS. AVOID ALL CONTACT BY MOUTH. PREVENT ACCESS TO BAIT by children, birds and non-target animals particularly dogs, cats, pigs and poultry. Search for and remove rodent bodies at frequent intervals during treatment (unless used in sewers). Collect and dispose of the remains of bait and any remaining rodent bodies after treatment (unless used in sewers). You must ensure that you comply with legislation regarding the correct disposal of waste. For further guidance, contact the Environment Agency or your local Scottish Environment Protection Agency (SEPA) office. HARMFUL TO WILDLIFE. DO NOT PLACE BAIT where food, feed or water could become contaminated (except when used in sewers). IF YOU FEEL UNWELL, seek medical advice (show the label where possible.
WASH HANDS AND EXPOSED SKIN before meals and after use.
EMPTY CONTAINER COMPLETELY and dispose of safely.
When working in rodent infested areas it is recommended that synthetic rubber/PVC gloves be worn to protect against rodent borne disease. Always attach labels to any containers used to carry bait decanted from the main container. Do not remove inner liner from outer bag. STORE UNUSED SACHETS in a safe place. DO NOT STORE part used sachets (place packs). Where appropriate, secure the bait (place pack/sachet) at its placement site to reduce the likelihood of its removal by rodents (or by surges of water if intended for use in sewers).

7.2. Conditions for safe storage, including any incompatibilities
Tightly closed, in a safe place. Store in a cool dry place. Protect from frost.
Store in the original container in a dry and well ventilated place
Keep away from sun radiation and other heat sources. Protect against frost.
The product is stable for more than 2 years.

7.3. Specific end use(s)
For use as a rodenticide

8 Exposure controls and personal protection

8.1. Control parameters
No specific national limit values have been established

8.2. Exposure controls
Where exposure may occur engineering controls should be employed. A risk assessment should be carried out and the following PPE may be appropriate /required

PPE	ITEM IN USE	SPILLAGE

Respirators		Half mask respirator to EN140 plus P class filter to EN 143 to required (nominal) protection factor (minimum).
Gloves	Unlined/Flock lined, synthetic rubber/PVC to EN 374. (300mm in length) e.g. Nitrile.	Unlined/Flock lined, synthetic rubber/PVC to EN 374. (300mm in length) e.g. Nitrile
Overall	Basic type e.g. Heavy duty polycotton or coverall type 5/6.	Coverall type 5/6.
Goggles/ Face shield		Goggles to EN 166 3459B.

9 Physical and chemical properties

9.1. General information

Appearance: A green/blue whole wheat grain bait
Odour: characteristic wheat odour.
pH: Not applicable
Density: 0.7
Flammability: Will burn in a fire
Boiling point/boiling range: Not applicable
Vapour density: Not applicable
Vapour pressure: Not applicable
Melting point/freezing point: Not applicable
Solubility in water: Insoluble
Solubility in other solvents: not determined
Explosive properties: None
Combustibility: combustible
Oxidising properties: None
Evaporation rate: not applicable
Partition coefficient: not applicable
Decomposition temp: not determined
Auto-ignition temp: Not determined

10 Stability and reactivity

10.1. Reactivity: Not reactive mixture

10.2. Chemical stability: Mixture is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions: None anticipated

10.4. Conditions to avoid: Avoid extremes of temperature

10.5. Incompatible materials: Store away from strong oxidising agents

10.6. Hazardous decomposition products: Carbon monoxide and oxides of nitrogen, toxic and irritants released if mixture is involved in a fire.

11 Toxicological information

11.1 Information on toxicological effects

(a) Acute toxicity: Information has been derived from the properties of the individual ingredients. Oral LD50 (rat) >2000mg/kg

Inhalation- Not an anticipated route of exposure. Dermal LD50 (rabbit)>40g/kg
(b) Corrosiveity/Irritation: Skin eyes, respiratory tract – no irritation potential expected. Information derived from the properties of the individual ingredients
(c) Sensitisation: contains no known skin or respiratory sensitizers.
(d) Repeated dose toxicity: The product has not been tested. Repeated exposure to small quantities may affect certain organs, Damages the coagulation system.
(e) Mutagenicity/Carcogenicity: Product does not contain any ingredients known to have such effects.
(f) Reproductive toxicity: Product does not contain any ingredients known to have effects on fertility or the reproductive system.

11.2 Other data: see section 2.3

12 Ecological information

12.1. Toxicity: The Bromadiolone in this product is classified as very toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. However, when used in accordance with instructions, controlled release of this product is not expected to cause environmental contamination

LC50 Fish (96 hour, rainbow trout) 28g/l

LC50 Daphnia (48hr Daphnia magna) 4.8g/l

LD50 Bird (quail) >30 000g/kg

12.2. Persistence and degradability: Degradation in soil is slow. For Bromadiolone, aerobic degradation half-life is 53 days, anaerobic degradation half-life is 60 days.

12.3. Bioaccumulative potential: The active ingredient properties indicate a potential to bioaccumualte.

12.4. Mobility in soil: Mobility potential is very low and will depend principally on the soil type. Bromadiolone and any potential degradation products, even if released indirectly to soil in small quantities are not likely to move through the soil profile and are unlikely to reach groundwater in significant quantities.

12.5. Results of PBT and vPvB assessment: Does not meet requirement for assessment
12.6. Other adverse effects: None known

13 Disposal considerations

13.1. Waste treatment methods

- Empty outer pp 20k bag, uncontaminated- classified non-hazardous. EWC code 15 01 02

Consider recycling route.
• Empty outer pp 20k bag, contaminated but shaken empty. EWC code 20 01 19.
• Empty inner liner (20k bag), contaminated but shaken empty. EWC code 20 01 19.
• Empty pp bag plus inner liner, contaminated but shaken empty. EWC code 20 01 19.
• Coveralls, gloves, other PPE, contaminated. EWC code 15 02 03. Waste classification non-hazardous. None of hazardous properties apply.
• Spent bait. EWC code 20 01 19. Biocide solid waste. Waste classification hazardous.
• Contact supplier, local authority or Environment Agency for advice about disposal of waste items.
Remove all baits after treatment and dispose of them in accordance with local requirements.
Dead rodents and bait found outside bait stations should be disposed of using protective gloves.
Professionals: For information on disposal in the UK contact the Environment Agency (http://www.environment-agency.gov.uk) or SEPA (http://www.sepa.org.uk).

14 Transport information

14.1. UN number: Not applicable

14.2. UN proper shipping name: Not applicable

14.3. Transport hazard class(es) : Not applicable

14.4. Packing group: Not applicable

14.5. **Environmental hazards:** Not applicable

14.6. **Special precautions for user:** Not applicable

14.7. **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable

15 Regulatory information

15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
Classification & Labelling according to Regulation (EC) No 1272/2008
Control of Substances Hazardous to Health Regulations 2002 (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
• Restricted to professional users.
• Refer to other relevant measures such as the Health and Safety at Work etc. Act 1974 and the COSHH regulations and guidance.
• The information contained in this data sheet does not constitute the user's own assessment of workplace risks as required by legislation.

15.2. Chemical safety assessment: Advice on product handling can be found in sections 7 and 8.

16 Other information

Use only in accordance with label instructions.
Operatives using this product should be trained in its use.
The information in this data sheet should be considered when undertaking a risk assessment under the COSHH regulations.
Ingredient classification data:
T+, very toxic.
Xn- Harmful.
Xi- Irritant.
N-Dangerous for the environment.
R27/28- Very toxic in contact with skin and if swallowed.
R20/22- Harmful by inhalation and if swallowed.
R38- Irritating to skin.
R41- Risk of serious damage to eyes.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term effects in the aquatic environment.

H301: Toxic if swallowed
H311: Toxic in contact with skin
H330: Fatal if inhaled
H372: Causes damage to organs through prolonged or repeated exposure
H412: Harmful to aquatic life with long lasting effects
H302: Harmful if swallowed
H315: Causes skin irritation
H332: Harmful if inhaled
H318: Causes serious eye damage

This data sheet does not constitute a COSHH assessment.
The information contained within this data sheet is strictly for general guidance only and should not be relied upon over and above this. This data sheet is intended to provide general health and safety guidance on the handling, storage and transportation of the preparation. The information provided in this data sheet is accurate at the date of publication and will be updated as and when appropriate. No liability will be accepted by Killgerm Chemicals Limited for any loss, injury or damage arising from any failure to comply with the information and advice contained within this data sheet and/or failure to comply with the manufacturer's guidelines, product label data and any associated technical usage

literature.