

| 1. Identification of the substance or mixture and of the supplier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                   |           |    |                                                                                           |            |           |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------|----|-------------------------------------------------------------------------------------------|------------|-----------|--|--|
| Trade name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MORTORAR G                                                                                        |           |    |                                                                                           |            |           |  |  |
| Product Use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pest (rodent) control                                                                             |           |    |                                                                                           |            |           |  |  |
| Supplier/Manufacture Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Valbrenta Chemicals Co., Ltd                                                                      |           |    |                                                                                           |            |           |  |  |
| Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Russia, 140074, Moscow region, Lyubertsy district, village. Tomilino, microdistrict Ptitsefabrika |           |    |                                                                                           |            |           |  |  |
| Emergency phone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | + 7 (495) 558-26-66                                                                               |           |    |                                                                                           |            |           |  |  |
| 2. Hazard identification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                   |           |    |                                                                                           |            |           |  |  |
| <p>Acute Toxicity Oral – 4<br/>Acute Toxicity Dermal – 4<br/>Acute Toxicity Inhalation – 4</p> <p><u>Skin and eye contact:</u><br/>Redness, dryness.</p> <p><u>Inhalation:</u><br/>In manufacturing process may cause weakness headache, nausea.</p> <p><u>Ingestion:</u><br/>Headache, weakness, bitter taste in the mouth, possible bleeding and haemorrhage.</p> <p><b>Potential Chronic Health Effects:</b></p> <p><u>Carcinogenic Effects:</u> Not available.                      <u>Mutagenic Effects:</u> Not available.<br/><u>Teratogenic effects:</u> Not available.<br/><u>Developmental toxicity:</u> Not available.</p> |                                                                                                   |           |    |                                                                                           |            |           |  |  |
| 3. Composition/information on ingredients                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                   |           |    |                                                                                           |            |           |  |  |
| Main hazardous ingredients:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                   |           |    |                                                                                           |            |           |  |  |
| <table><tr><th>Name</th><th>CAS#</th><th>EC</th></tr><tr><td>4-hydroxy-3-(3-(4'-bromo-4-biphenyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin (brodifacoum)</td><td>56073-10-0</td><td>259-980-5</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                         | Name                                                                                              | CAS#      | EC | 4-hydroxy-3-(3-(4'-bromo-4-biphenyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin (brodifacoum) | 56073-10-0 | 259-980-5 |  |  |
| Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CAS#                                                                                              | EC        |    |                                                                                           |            |           |  |  |
| 4-hydroxy-3-(3-(4'-bromo-4-biphenyl)-1,2,3,4-tetrahydro-1-naphthyl)coumarin (brodifacoum)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 56073-10-0                                                                                        | 259-980-5 |    |                                                                                           |            |           |  |  |
| 4. First-aid measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                   |           |    |                                                                                           |            |           |  |  |
| <p><u>Ingestion:</u><br/>In case of ingestion rinse mouth with plenty of water; induce vomiting, then take saline laxative or activated charcoal. Do not give anything by mouth to the person that is not fully conscious. Seek immediate medical attention.</p>                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                   |           |    |                                                                                           |            |           |  |  |

Antidotes: vitamin K<sub>3</sub> (Vicasol) and K<sub>1</sub> (Phytomenadione).

Inhalation:

Remove victim to the fresh air, keep warm and at rest.

Skin contact:

Remove contaminated shoes and clothing. Wash skin with water and soap. Seek medical attention if an allergic skin reaction occurs.

Eye contact:

Flush eye with water holding eyelids apart. Seek medical attention if irritation persists.

### 5. Fire-fighting measures

Combustible in the open fire. Non-explosive.

Fire extinguishing materials:

Water spray jet: Yes

Direct water jet: Yes

Foam: Yes

Dry powder: Yes

### 6. Accidental release measures

Personal precautions:

Avoid contact with skin, eyes or clothing. Use protective equipment. Do not breathe mists/vapours/spray.

Environmental precautions:

Minimize contamination of sewage water, soil, groundwater, drainage systems. Prevent further leakage if safe to do so. Clean contaminated areas thoroughly while observing environmental regulations.

Methods for cleaning up:

Collect or sweep up into containers for disposal. Neutralize washwater with 25% bicarbonate solution prior to discharge to the industrial sewage system. Treat damaged area with bleach paste.

### 7. Handling and storage

Handling:

Smoking, eating and drinking should be prohibited. Avoid contact with skin. Wash hands and face and take shower before eating, drinking or smoking.

Storage:

Store in a dry, well-ventilated area at temperature -20°C...+45°C. Protect from direct sunlight, sources of ignition and opened fires. Storages should be suitable for poisons.

Container:

Individual packaging.

## 8. Exposure controls/personal protection

| Name        | Exposure limits                    |
|-------------|------------------------------------|
| Brodifacoum | OSHA/ NIOSH limits not established |

### Respiratory protection:

Respirators.

### Other protective clothing or equipment:

Use rubber gloves and cotton suit. Use special equipment (pincers, spoons) to minimize contact with hands.

### Environmental exposure control:

Minimize the waste generation. Avoid dispersal of spilled substance and contact with the soil, waterways, drains and sewers. Waste waters should be collected in containers and send for disinfection or disposal. Do not throw the bodies of rodents into the garbage tanks and water bodies.

## 9. Physical and chemical properties

|                           |                |
|---------------------------|----------------|
| Physical state:           | Soft solid     |
| Colour:                   | Red            |
| Odor:                     | Not specified  |
| pH(aqueous solution):     | Not specified  |
| Humidity:                 | Not specified  |
| Evaporation rate:         | Not specified  |
| Vapor density:            | Not specified  |
| Vapor pressure:           | Not specified  |
| Boiling point:            | Not specified  |
| Melting point:            | >200 °C        |
| Freezing point:           | Not specified  |
| Flash point:              | Not specified  |
| Autoignition temperature: | Not specified  |
| Solubility in water:      | Insoluble      |
| Particle sizes:           | Not applicable |
| Oxidizing properties:     | Not specified  |
| Density:                  | Not specified  |
| Viscosity:                | Not specified  |

## 10. Stability and reactivity

### Stability:

Stable under recommended storage conditions. Hazardous polymerization will not occur.

### Material with which substance is incompatible:

No information available about the product.

### Hazardous decomposition products:

No information available about the product.

### 11. Toxicological information

Acute Toxicity:

Brodifacoum:

$0.4 < LD_{50}(\text{oral, rat}) \leq 5 \text{ mg/kg}$

$LC_{50}(4 \text{ hours, rat}) = 3.05 \text{ mg/m}^3$

$3.16 < LD_{50}(\text{dermal, rat}) \leq 7.5 \text{ mg/kg}$

Effects of long-term exposure:

Repeated oral dose of brodifacoum exposed to the rats and dogs leads to impairment of the clotting cascade and increased prevalence of haemorrhage leading to death.

Irritation:

Not irritant.

Carcinogenicity:

Not considered to have carcinogenic properties.

Bioaccumulation:

No information available about the product.

Mutagenicity:

Not considered to have mutagenic properties.

-

Reproductive toxicity:

No effects on fertility or reproductive performance effects were observed at doses eliciting general toxicity.

### 12. Ecological information

Effect on plants and animals and aquatic life: Brodifacoum is highly toxic to aquatic life

Ecotoxicity:

Brodifacoum:

$LC_{50}(96 \text{ hours, rainbow trout}) = 0.042 \text{ mg/l}$

$EC_{50}(48 \text{ hours, daphnia magna}) = 0.25 \text{ mg/l}$

### 13. Disposal considerations

Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled. Where large quantities are concerned, consult the supplier. Recycle or dispose of in accordance with prevailing regulations, by a recognised collector or contractor. The competence of the contractor to deal satisfactorily with this type of product should be established beforehand.

Dispose the product and any by-products in accordance with the requirements of environmental protection, waste disposal legalization and the requirements of the local

authorities.

#### 14. Transport information

Transported in containers in accordance with the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), the Regulations of the International Carriage of Dangerous Goods by Rail (RID), of the International Maritime Dangerous Goods (IMDG Code), by the European agreement Concerning the International Carriage of Dangerous goods by Inland Waterways (ADN) and Annex 2 Rules of transportation of dangerous goods to the Agreement on International Goods Transport (SMGS).

##### IMDG:

|                      |                 |
|----------------------|-----------------|
| UN number:           | Not classified. |
| Class:               | Not applicable. |
| Subsidiary risk (s): | Not applicable. |
| Packing group:       | Not applicable. |
| Special provision:   | Not applicable. |

##### RID:

|                             |                 |
|-----------------------------|-----------------|
| UN number:                  | Not applicable. |
| Class                       | Not applicable. |
| Classification code:        | Not applicable. |
| Packing instructions:       | Not applicable. |
| Special packing provisions: | Not applicable. |
| Special provision:          | Not applicable. |

##### IATA:

|                |                 |
|----------------|-----------------|
| UN number      | Not applicable. |
| Packing group: | Not applicable. |

##### Passengers and cargo aircraft

##### EQ

|                                   |                 |
|-----------------------------------|-----------------|
| Packing instruction:              | Not applicable. |
| Maximum net quantity per packing: | Not applicable. |

##### Only cargo aircraft:

|                                   |                 |
|-----------------------------------|-----------------|
| Packing instruction:              | Not applicable. |
| Maximum net quantity per packing: | Not applicable. |

##### ERG Code

Not applicable.

#### 15. Regulatory information

##### **Globally Harmonized System, EU (GHS)**

Pictogram:<sup>1</sup>

1

<sup>1</sup> Resulting harmonized classification (future entry in Annex VI, CLP).



Signal word:

Warning

Hazard Statement:

|      |                              |
|------|------------------------------|
| H302 | Harmful if swallowed         |
| H312 | Harmful in contact with skin |
| H332 | Harmful if inhaled.          |

Precaution Statements (Prevention):

|      |                                                     |
|------|-----------------------------------------------------|
| P261 | Avoid breathing dusts/fume.                         |
| P264 | Wash hands thoroughly after handling.               |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area.     |
| P280 | Wear protective gloves/protective clothing.         |

Precaution Statements (Response):

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| P301+P312 | IF SWALLOWED: Call a poison center/doctor if you feel unwell.              |
| P302+P352 | IF ON SKIN: wash plenty of water.                                          |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P330      | Rinse mouth.                                                               |
| P362+P364 | Take off contaminated and wash it before reuse.                            |

Precaution Statements (Disposal):

|      |                                                                                                      |
|------|------------------------------------------------------------------------------------------------------|
| P501 | Dispose of contents/containers in accordance with local/regional/national/international regulations. |
|------|------------------------------------------------------------------------------------------------------|

**Regulation 1272/2008/EC on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation 1907/2006/EC:**

Xn - Harmful



R-phrases:

- |    |                               |
|----|-------------------------------|
| 20 | Harmful by inhalation.        |
| 21 | Harmful in contact with skin. |
| 22 | Harmful if swallowed.         |

**S-phrases:**

- |           |                                                                   |
|-----------|-------------------------------------------------------------------|
| S13       | Keep away from food, drink and animal foodstuffs                  |
| S20       | When using do not eat or drink                                    |
| S24/25    | Avoid contact with skin and eyes                                  |
| S36/37/39 | Wear suitable protective clothing, gloves and eye/face protection |

**HSNO (Hazardous Substances and New Organisms):**

6.1D

**16. Other information including information on preparation and revision of the SDS**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**Definition of terms**

Definition of abbreviations used in MSDS:

|       |                                                                                     |
|-------|-------------------------------------------------------------------------------------|
| TWA   | Time-Weighted Average                                                               |
| REL   | Recommended Exposure Level                                                          |
| PEL   | Permitted Exposure Level                                                            |
| NIOSH | National Institute for Occupational Safety and Health                               |
| OSHA  | Occupational Safety and Health Administration                                       |
| LC50  | Median lethal concentration.                                                        |
| LD50  | Median lethal dose.                                                                 |
| EL50  | Effective loading rate lethal to 50% of the test population                         |
| LL50  | Lethal loading                                                                      |
| IMDG  | International Maritime Dangerous Goods Code.                                        |
| RID   | Regulations concerning the International Carriage of Dangerous Goods by Rail.       |
| ADR   | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ICAO  | International Civil Aviation Organization                                           |
| IATA  | International Air Transport Association                                             |

... END OF SDS...

