



Safety Data Sheet dated 27/2/2018, version 2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name: JADE GRAIN

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

Recommended use:

Rodenticide - Biocidal use

Professional use

Uses advised against:

Do not use for purposes other than those stated in "Recommended uses"

### 1.3. Details of the supplier of the safety data sheet

Company:

Lodi Group - Parc d'Activités des Quatre Routes

35390 Grand Fougeray - France Tel 0033 (0) 2.99.08.48.59

Competent person responsible for the safety data sheet:

fds@lodi.fr

### 1.4. Emergency telephone number

NPIS (National Poison Centre) - Birmingham Unit

[To be called by medical staff or physicians]

City Hospital, Birmingham, B18 7QH, UK


Tel: 0844 892 011


## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

EC regulation criteria 1272/2008 (CLP)

 Danger, Repr. 1B, May damage the unborn child.

 Danger, STOT RE 1, Causes damage to organs (blood) through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H360D May damage the unborn child.

H372 Causes damage to organs (blood) through prolonged or repeated exposure.

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**Precautionary statements:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash ... Thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with applicable regulations.

**Special Provisions:**

None

**Contains**

Bromadiolone ATP9

**Special provisions according to Annex XVII of REACH and subsequent amendments:**

None

**2.3. Other hazards**

vPvB Substances: None - PBT Substances: None

**Other Hazards:**

No other hazards

SECTION 2: Hazards identification








### SECTION 3: Composition/information on ingredients

**3.1. Substances**

Not available

**3.2. Mixtures**

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty    | Name         | Ident. Number                    | Classification  |
|--------|--------------|----------------------------------|---|
| 50 ppm | Bromadiolone | CAS: 28772-56-7<br>EC: 249-205-9 |  3.1/1/Oral Acute Tox. 1 H300<br> 3.7/1B Repr. 1B H360<br> 3.1/1/Dermal Acute Tox. 1 H310<br> 3.1/1/Inhal Acute Tox. 1 H330<br> 3.9/1 STOT RE 1 H372<br> 4.1/A1 Aquatic Acute 1 H400 M=1.<br> 4.1/C1 Aquatic Chronic 1 H410 M=1. |

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

In case of skin contact:

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Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash with plenty of water and soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of skin or eye contact, immediately and thoroughly wash with water.

Seek medical attention if ill effect or irritation develops

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Rinse the eye slowly and gently with water for 15-20 minutes

Remove contact lenses if present

Seek medical advice immediately

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

Do not give anything by mouth.

Do not induce vomiting.

In case of ingestion, rinse mouth with water.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

In case of inhalation, breath fresh air and have a rest. In case of faintness, consult a physician and show the label.

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

Internal haemorrhage in case of ingestion

This product contains an anticoagulant substance. If ingested, symptoms, which may be delayed, may include nosebleed and bleeding gums. In severe cases, there may be bruising and blood present in the faeces or urine.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Antidote: Vitamin K1 administered by medical/veterinary personnel only.

Consult a physician and show the label

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

### 5.3. Advice for firefighters

Use suitable breathing apparatus .

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Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

##### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

##### 6.3. Methods and material for containment and cleaning up

Rapidly recover the product. To do so, wear a mask and protective clothing.

Wash with plenty of water.

##### 6.4. Reference to other sections

See also section 8 and 13

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#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

Exercise the greatest care when handling or opening the container.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

##### 7.2. Conditions for safe storage, including any incompatibilities

Store in original container, tightly closed

Keep in a dry and cool place.

Keep out of reach of children

Keep away from sources of ignition - No Smoking.

Keep away from food and drink and animal feeding stuffs

Store in places prevented from the access of children, birds, pets and farm animals.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

##### 7.3. Specific end use(s)

None in particular

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#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

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No occupational exposure limit available  
 DNEL Exposure Limit Values  
   Not available  
 PNEC Exposure Limit Values  
   Bromadiolone - CAS: 28772-56-7  
     Target: Fresh Water - Value: 3.8E-4 mg/l  
     Target: Microorganisms in sewage treatments - Value: 1.33 mg/l  
     Target: Freshwater sediments - Value: 0.83 mg/kg  
     Target: 19250.LODI01 - Value: 0.099 mg/kg

#### 8.2. Exposure controls

##### Eye protection:

Avoid contact with eyes

##### Protection for skin:

Overall.

Wash clothing regularly

##### Protection for hands:

Wearing gloves is mandatory.

Waterproof gloves according to NF EN374

##### Respiratory protection:

Do not breathe dusts

Wear appropriate respiratory apparatus

Class FFP1

##### Thermal Hazards:

Keep away from heat and direct sunlight.

##### Environmental exposure controls:

Prevent access to children, pets and non-target animals.

Avoid release in the environment

Avoid release in watercourses and sewers

Place baits in areas not submersible and weatherproof.

Hazardous to wildlife.

##### Appropriate engineering controls:

None

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties                               | Value           | Method:   | Notes: |
|--|-----------------|---|--------|
| Appearance and colour:                   | Green Grain     | 19272   | --     |
| Odour:                                   | Cereals         | 19273.1   | --     |
| Odour threshold:                         | Not available   | --  | --     |
| pH:                                      | 6.9             | 19275.05  | --     |
| Melting point / freezing point:          | Not available   | --  | --     |
| Initial boiling point and boiling range: | Not available   | --  | --     |
| Flash point:                             | Not available   | --  | --     |
| Evaporation rate:                        | Not available   | --  | --     |
| Solid/gas flammability:                  | Non inflammable | Regulation (EC) No. 440/2008, Annex, A.10 (solid) | --     |

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|   |               |   |    |
|---|---------------|---|----|
| Upper/lower flammability or explosive limits: | Not available | --  | -- |
| Vapour pressure:                              | Not available | --  | -- |
| Vapour density:                               | Not available | --  | -- |
| Relative density:                             | 1.377         | OECD 109                                  | -- |
| Solubility in water:                          | Not available | --  | -- |
| Solubility in oil:                            | Not available | --  | -- |
| Partition coefficient (n-octanol/water):      | Not available | --  | -- |
| Auto-ignition temperature:                    | Not available | --  | -- |
| Decomposition temperature:                    | Not available | --  | -- |
| Viscosity:                                    | Not available | --  | -- |
| Explosive properties:                         | Non explosif  | Regulation (EC) No. 440/2008, Annex, A.14 | -- |
| Oxidizing properties:                         | Not available | --  | -- |

### 9.2. Other information

| Properties                           | Value         | Method: | Notes: |
|--------------------------------------|---------------|---------|--------|
| Miscibility:                         | Not available | --      | --     |
| Fat Solubility:                      | Not available | --      | --     |
| Conductivity:                        | Not available | --      | --     |
| Substance Groups relevant properties | Not available | --      | --     |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Toxicological information of the product:  
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- a) acute toxicity:
  - Test: LD50 - Route: oral - Species: Rat : > 2000 mg/Kg - Source: OECD 423
  - Test: LD50 - Route: dermal - Species: Rat : > 2000 mg/Kg - Source: OECD 402
- b) skin corrosion/irritation:
  - Test: Skin Irritant - Route: dermal - Species: Rabbit : Non irritating - Source: OECD 404
- c) serious eye damage/irritation:
  - Test: Eye Irritant - Route: ocular - Species: Rabbit : Non irritating - Source: OECD 405
- d) respiratory or skin sensitisation:
  - Test: Skin Sensitization - Route: dermal - Species: Guinea Pig : Non skin sensitizer - Source: OECD 406

#### Adverse health effects

Reprotoxic category 1

#### Toxicological information of the main substances found in the product:

Bromadiolone - CAS: 28772-56-7

- a) acute toxicity:
  - Test: LD50 - Route: oral - Species: Rat : = 1.31 mg/Kg - Source: Product Assessment Report - Notes: male and female rats combined) 95% confidence limits 1.17 to 1.49 mg/kg bw/d
  - Test: LD50 - Route: dermal - Species: Rabbit : = 23.31 mg/Kg - Source: Product Assessment Report - Notes: male and female rabbits combined
  - Test: LD50 - Route: dermal - Species: Rat : = 1.71 mg/Kg - Source: Product Assessment Report - Notes: male and female rats combined
  - Test: LC50 - Route: Inhalation - Species: Rat : = 0.43 18206.ugL - Source: Product Assessment Report - Notes: males and females combined
- g) reproductive toxicity:
  - Test: LOAEL - Route: oral - Species: Rabbit : = 2 18206.ugkgbw/d - Source: Product Assessment Report - Notes: Maternal toxicity
  - Test: NOAEL - Route: oral - Species: Rabbit : = 4 18206.ugkgbw/d - Source: Product Assessment report - Notes: Developmental toxicity

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

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## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Bromadiolone - CAS: 28772-56-7

#### a) Aquatic acute toxicity:

Endpoint: ErC50 Algae = 1.14 mg/L - Duration h: 72

Endpoint: LC50 Fish = 2.86 mg/L - Duration h: 96

Endpoint: EC50 Daphnia magna = 5.79 mg/L - Duration h: 48

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c) Bacteria toxicity:

Endpoint: EC50 Activated sludge = 132.8 mg/L - Duration h: 3

### 12.2. Persistence and degradability

Not available

### 12.3. Bioaccumulative potential

Bromadiolone - CAS: 28772-56-7

Bioaccumulation: Bioaccumulative - Test: Kow - Partition coefficient 3.8 - Duration: Not available - Notes: log Kow

### 12.4. Mobility in soil

Not available

### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

### 12.6. Other adverse effects

None

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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## SECTION 14: Transport information

### 14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

### 14.2. UN proper shipping name

Not available

### 14.3. Transport hazard class(es)

Not available

### 14.4. Packing group

Not available

### 14.5. Environmental hazards

Marine pollutant: No  
Not available

### 14.6. Special precautions for user

Not available

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not available

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## SECTION 15: Regulatory information



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

Dir. 98/24/EC (Risks related to chemical agents at work)  
 Dir. 2000/39/EC (Occupational exposure limit values)  
 Regulation (EC) n. 1907/2006 (REACH)  
 Regulation (EC) n. 1272/2008 (CLP)  
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
 Regulation (EU) 2015/830  
 Regulation (EU) n. 286/2011 (ATP 2 CLP)  
 Regulation (EU) n. 618/2012 (ATP 3 CLP)  
 Regulation (EU) n. 487/2013 (ATP 4 CLP)  
 Regulation (EU) n. 944/2013 (ATP 5 CLP)  
 Regulation (EU) n. 605/2014 (ATP 6 CLP)  
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
 Regulation (EU) n. 2016/918 (ATP 8 CLP)  
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Restrictions related to the product or the substances contained according to Annex XVII  
 Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)  
 Regulation (EC) nr 648/2004 (detergents).  
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1  
 None

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H300 Fatal if swallowed.  
 H360 May damage fertility or the unborn child if inhaled and in contact with skin.  
 H310 Fatal in contact with skin.  
 H330 Fatal if inhaled.  
 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.

| Hazard class and hazard category | Code         | Description                             |
|----------------------------------|--------------|---|
| Acute Tox. 1                     | 3.1/1/Dermal | Acute toxicity (dermal), Category 1     |
| Acute Tox. 1                     | 3.1/1/Inhal  | Acute toxicity (inhalation), Category 1 |
| Acute Tox. 1                     | 3.1/1/Oral   | Acute toxicity (oral), Category 1       |
| Repr. 1B                         | 3.7/1B       | Reproductive toxicity, Category 1B      |

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|                   |        |  |
|-------------------|--------|--|
| STOT RE 1         | 3.9/1  | Specific target organ toxicity - repeated exposure, Category 1 |
| Aquatic Acute 1   | 4.1/A1 | Acute aquatic hazard, category 1                               |
| Aquatic Chronic 1 | 4.1/C1 | Chronic (long term) aquatic hazard, category 1                 |

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking  
 SECTION 2: Hazards identification  
 SECTION 2: Hazards identification  
 SECTION 4: First aid measures  
 SECTION 7: Handling and storage  
 SECTION 8: Exposure controls/personal protection  
 SECTION 9: Physical and chemical properties  
 SECTION 10: Stability and reactivity  
 SECTION 11: Toxicological information  
 SECTION 12: Ecological information  
 SECTION 15: Regulatory information  
 SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure |
|---|--------------------------|
| Repr. 1B, H360  | Calculation method       |
| STOT RE 1, H372   | Calculation method       |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 CAS: Chemical Abstracts Service (division of the American Chemical Society).  
 CLP: Classification, Labeling, Packaging.  
 CSR: Chemical safety report  
 DNEL: Derived No Effect Level.  
 EC50:  
 EINECS: European Inventory of Existing Commercial Chemical Substances.  
 GefStoffVO: Ordinance on Hazardous Substances, Germany.  
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
 IATA: International Air Transport Association.  
 IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

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|          |   |
|----------|---|
|          | Association" (IATA).  |
| ICAO:    | International Civil Aviation Organization.  |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG:    | International Maritime Code for Dangerous Goods.                                  |
| INCI:    | International Nomenclature of Cosmetic Ingredients.                               |
| KSt:     | Explosion coefficient.  |
| LC50:    | Lethal concentration, for 50 percent of test population.                          |
| LD50:    | Lethal dose, for 50 percent of test population.                                   |
| N.A.:    | Not available   |
| PNEC:    | Predicted No Effect Concentration.  |
| RID:     | Regulation Concerning the International Transport of Dangerous Goods by Rail.     |
| STEL:    | Short Term Exposure limit.  |
| STOT:    | Specific Target Organ Toxicity.   |
| TLV:     | Threshold Limiting Value.   |
| TWA:     | Time-weighted average   |
| UN:      | United Nations  |
| WGK:     | German Water Hazard Class.  |