



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: RUBY 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 fertility or the unborn child.

 Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H360 May damage the unborn child.

H373 May cause damage to organs 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.
- 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**

Difenacoum

**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	Difenacoum	CAS: 56073-07-5 EC: 259-978-4	 3.1/1/Dermal Acute Tox. 1 H310  4.1/A1 Aquatic Acute 1 H400 M=10.  4.1/C1 Aquatic Chronic 1 H410 M=10.  3.1/1/Inhal Acute Tox. 1 H330  3.1/1/Oral Acute Tox. 1 H300  3.7/1B Repr. 1B H360  3.9/1 STOT RE 1 H372

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

In case of skin contact:

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.

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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.  
Thoroughly wash with soap and water

In case of eyes contact:

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

Rinse immediately with plenty of water

Seek medical attention if ill effect or irritation develops

In case of Ingestion:

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

In case of ingestion, rinse mouth with water.

Do not induce vomiting.

Immediately consult a physician and show the label.

In case of exposure, contact the nearest poison centre.

Do not give anything by mouth.

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

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.

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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 .

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

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### 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

Keep out of reach of children  
Keep away from food and drink and animal feeding stuffs  
Store in the original container  
Store away from light.  
Store in places prevented from the access of children, birds, pets and farm animals.  
Keep away from food, drink and feed.  
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

No occupational exposure limit available  
DNEL Exposure Limit Values  
Not available  
PNEC Exposure Limit Values  
Not available

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### 8.2. Exposure controls

#### Eye protection:

Avoid contact with eyes

#### Protection for skin:

Overall.

Wash clothing regularly

#### Protection for hands:

Wear gloves

Waterproof gloves according to NF EN374

Wash hands after handling.

#### Respiratory protection:

Do not breathe dusts

#### Thermal Hazards:

None

#### Environmental exposure controls:

Hazardous to wildlife.

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.

#### 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:	Red Grain	19272	--
Odour:	Caractéristic	19273.1	--
Odour threshold:	Not available	--	--
pH:	Not available	--	--
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)	--
Upper/lower flammability or explosive limits:	Not available	--	--
Vapour pressure:	Not available	--	--
Vapour density:	Not available	--	--
Relative density:	0.70 g/ml - 0.76g/ml	CIPAC MT 186	--
Solubility in water:	Not available	--	--
Solubility in oil:	Not available	--	--
Partition coefficient	Not available	--	--

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(n-octanol/water):			
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

Test: LD50 - Route: dermal - Species: Rat : > 2000 mg/Kg

b) skin corrosion/irritation:

Test: Skin Irritant - Route: dermal - Species: Rabbit : Non irritating

c) serious eye damage/irritation:

Test: Eye Irritant - Route: ocular - Species: Rabbit : Non irritating

d) respiratory or skin sensitisation:

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Test: Skin Sensitization - Route: dermal - Species: Guinea Pig : Non skin sensitizer

Adverse health effects

Reprotoxic category 1

Toxicological information of the main substances found in the product:

Difenacoum - CAS: 56073-07-5

a) acute toxicity:

Test: LD50 - Route: dermal - Species: Rat : > 51.54 mg/Kg - Source: Assessment report Difenacoum Product Type 14 (rodenticide) 17 september 2009 - Notes: Females

Test: LD50 - Route: oral - Species: Rat : > 1.8 mg/Kg - Source: Assessment report Difenacoum Product-type 14 (Rodenticides) 17 September 2009

Test: LD50 - Route: Inhalation - Species: Rat : > 0.0036 mg/Kg - Duration: 4h - Source: Assessment report Difenacoum Product-type 14 (Rodenticides) 17 September 2009 - Notes: Head-only (S)

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.

Difenacoum - CAS: 56073-07-5

a) Aquatic acute toxicity:

Endpoint: LC50 Rainbow Trout = 0.064 mg/L - Duration h: 96

Endpoint: LC50 Daphnia magna = 0.52 mg/L - Duration h: 48

Endpoint: ErC50 Algae = 0.8 mg/L - Duration h: 72

c) Bacteria toxicity:

Endpoint: EC50 Pseudomonas putida > 2.3 mg/L - Duration h: 6

#### 12.2. Persistence and degradability

Difenacoum - CAS: 56073-07-5

Biodegradability: Non-readily biodegradable - Test: Not available - Duration: Not available - %: Not available - Notes: Not available

#### 12.3. Bioaccumulative potential

Difenacoum - CAS: 56073-07-5

Bioaccumulation: Not available Test: BCF - Bioconcentration factor 35645 - Duration: Not available - Notes: fish - calculated according to TGD method, Eq. 75, using estimated log Kow value of 7.6

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Bioaccumulation: Not available Test: BCF - Bioconcentration factor 9010 - Duration: Not available - Notes: fish - calculated according to the EPA EPIWIN BCF estimation program, using log Kow value of 7.6)

Bioaccumulation: Not available Test: BCF - Bioconcentration factor 477729 - Duration: Not available - Notes: earthworm - calculated according to TGD method, Eq. 82d, using estimated log Kow value of 7.6

### 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

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

### 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)



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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:

Restriction 3

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.

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### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H310 Fatal in contact with skin.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H330 Fatal if inhaled.

H300 Fatal if swallowed.

H360 May damage fertility or the unborn child if inhaled and in contact with skin.

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

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
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

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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 2, H373	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 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.

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