



SAFETY DATA SHEET
(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : RACAN AVOINE 25
UFI : 6POW-32X0-200Y-UAAX

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

Recommended use(s): Rodenticide - Biocidal use.
Use(s) advised against: Do not use for purposes other than those stated in "Recommended use(s)"

Use descriptor system (REACH) :

Not available.

1.3. Details of the supplier of the safety data sheet

Registered company name : LODI S.A.S.
Address : PA des Quatre Routes.35390.Grand-Fougeray.FRANCE.
Telephone : 02.99.08.48.59. Fax : 02 99 08 38 68.
fds@lodi.fr
<https://www.lodi-group.fr/>

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : Centres antipoison : <http://www.centres-antipoison.net..>

Other emergency numbers

European poison Control Center: 112

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Specific target organ toxicity (repeated exposure), Category 2 (STOT RE 2, H373).
This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.
This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

Biocidal mixture (see section 15).

> In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS08

Signal Word :

WARNING

Hazard statements :

H373 May cause damage to organs through prolonged or repeated exposure .

Precautionary statements - Prevention :

P260 Do not breathe dust.

Precautionary statements - Response :

P314 Get medical advice/attention if you feel unwell.

Precautionary statements - Disposal :

P501 Dispose of contents/container according to the regulation.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 59 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances $\geq 0.1\%$ with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

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> SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

> Composition :

Identification	Classification (EC) 1272/2008	Note	%
INDEX: 57_55_6B CAS: 57-55-6 EC: 200-338-0 REACH: 01-2119456809-23 PROPYLENE GLYCOL		[i]	0 <= x % < 2.5
INDEX: 607_716_00_8 CAS: 28772-56-7 EC: 249-205-9 BROMADIOLONE (ISO)	GHS06, GHS09, GHS08 Dgr Acute Tox. 1, H300 Acute Tox. 1, H310 Acute Tox. 1, H330 Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[ii]	0 <= x % < 2.5

Specific concentration limits:

Identification	Specific concentration limits	ATE
INDEX: 57_55_6B CAS: 57-55-6 EC: 200-338-0 REACH: 01-2119456809-23 PROPYLENE GLYCOL		oral: ATE = 22000 mg/kg BW
INDEX: 607_716_00_8 CAS: 28772-56-7 EC: 249-205-9 BROMADIOLONE (ISO)	Repr. 1B: H360D C>= 0.003% STOT RE 1: H372 C>= 0.005% STOT RE 2: H373 0.0005% <= C < 0.005%	dermal: ATE = 50 mg/kg BW

Nanoform

Not available.

Information on ingredients :

(Full text of H-phrases: see section 16)

[i] Substance for which maximum workplace exposure limits are available.

[ii] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

Remove casualty to fresh air and keep warm and at rest. Seek medical attention if difficulties appear and persist.

In the event of splashes or contact with eyes :

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately

In the event of splashes or contact with skin :

In case of skin exposure, clean skin with water then with soap. Seek medical attention if irritation or discomfort develops

In the event of swallowing :

Do not eat or drink.

In case of oral exposure, rinse mouth carefully with water.

In case of ingestion, rinse mouth with water. In case of ingestion, obtain a medical examination immediately and show the label. Contact a veterinary in case of ingestion by a pet.

Never give anything by mouth . Do not induce vomiting.

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

Specific and immediate treatment :

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

Information for the doctor :

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

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

> 6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

Contaminated wash water must be retained and disposed of. In the event of a gas leak or entry into watercourses, the ground or the drainage system, inform the responsible authorities.

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

> 6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming).

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

Wash with plenty of water.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

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.

Fire prevention :

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in dust.

Avoid exposure - obtain special instructions before use.

Packages which have been opened must be reclosed carefully and stored in an upright position.

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Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.
Contaminated clothing should be changed before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.
Keep the container tightly closed in a dry, well-ventilated place.
Keep away from food and drink and animal feeding stuffs.
Keep away from sources of ignition, heat and direct sunlight.
Store in the original container, hermetically sealed.
Store in places prevented from the access of children, birds, pets and farm animals.

Packaging

Always keep in packaging made of an identical material to the original.
Recommended types of packaging :
Original packaging.
Suitable packaging materials :
Original packaging.
Unsuitable packaging materials :
Different than the original packaging.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- UK :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
57-55-6 PROPYLENE GLYCOL	10 mg/m3				

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

|> - Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Amateurs and non-professionals: the gloves are recommended. Professionals : The gloves are mandatory. Wash hands after use.

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid inhaling dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149/A1.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

> Physical state

Physical state : Solid.
Physical state : Grain.

Colour

Colour: Green.

Odour

Odour threshold : Not stated.

Melting point

Melting point/melting range : Not relevant.

Freezing point

Freezing point / Freezing range : Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range : Not relevant.

Flammability

Flammability (solid, gas) : Non inflammable.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) : Not stated.
Explosive properties, upper explosivity limit (%) : Not stated.

Flash point

Flash point interval : Not relevant.

Auto-ignition temperature

Self-ignition temperature : Not relevant.

Decomposition temperature

Decomposition point/decomposition range : Not relevant.

> pH

pH (aqueous solution) : Not stated.
pH : 6.40 .
Neutral.
Guideline: CIPAC MT 75.3

Kinematic viscosity

Viscosity : Not stated.

Solubility

Water solubility : Insoluble.
Fat solubility : Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water : Not stated.

Vapour pressure

Vapour pressure (50°C) : Below 110 kPa (1.10 bar).

> Density and/or relative density

Density : 0.737 - 0.692

Relative vapour density

Vapour density : Not stated.

Particle characteristics

The mixture does not contain nanoforms.

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Avoid :

- formation of dusts

Dusts can form an explosive mixture with air.

10.5. Incompatible materials

None.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1. Substances

a) Acute toxicity :

BROMADIOLONE (ISO) (CAS: 28772-56-7)

Oral route :

LD50 ≤ 5 mg/kg body weight

Dermal route :

LD50 = 50 mg/kg body weight

Inhalation route (Dusts/mist) :

LC50 ≤ 0.05 ppm

Duration of exposure : 4 h

PROPYLENE GLYCOL (CAS: 57-55-6)

Oral route :

LD50 = 22000 mg/kg body weight

Species : Rat

Dermal route :

LD50 > 2000 mg/kg body weight

Species : Rabbit

Inhalation route (Dusts/mist) :

LC50 > 317042 mg/l

Species : Rabbit

b) Skin corrosion/skin irritation :

PROPYLENE GLYCOL (CAS: 57-55-6)

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

c) Serious damage to eyes/eye irritation :

PROPYLENE GLYCOL (CAS: 57-55-6)

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

d) Respiratory or skin sensitisation :

PROPYLENE GLYCOL (CAS: 57-55-6)

Guinea Pig Maximisation Test (GMPT) :

Non-sensitiser.

Species : Guinea pig

OECD Guideline 406 (Skin Sensitisation)

e) Germ cell mutagenicity :

PROPYLENE GLYCOL (CAS: 57-55-6)

No mutagenic effect.

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f) Carcinogenicity :

PROPYLENE GLYCOL (CAS: 57-55-6)

Carcinogenicity Test :

Negative.
No carcinogenic effect.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

No data available.

j) Aspiration hazard :

No data available.

11.1.2. Mixture

11.1.2.1 Information on hazard classes

a) Acute toxicity :

Oral route :

No data available.
Species : Rat
LD50 > 2000 mg/kg
OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

Dermal route :

No data available.
Species : Rat
LD50 > 2000 mg/kg
OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Dusts/mist) :

No data available.

b) Skin corrosion/skin irritation :

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

- Classification based on extreme pH and an acid or alkaline reserve

Tests have proven that the mixture is neither corrosive nor irritant despite the low/high pH.

c) Serious damage to eyes/eye irritation :

Splashes in the eyes may cause irritation and reversible damage

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Tests have proven that the mixture is not corrosive, does not produce serious ocular lesions or cause irritation despite the low/high pH.

d) Respiratory or skin sensitisation :

Guinea Pig Maximisation Test (GMPT) :

Non-sensitiser.
Species : Guinea pig
OECD Guideline 406 (Skin Sensitisation)

e) Germ cell mutagenicity :

No data available.

f) Carcinogenicity :

No data available.

g) Reproductive toxicant :

No data available.

h) Specific target organ systemic toxicity - single exposure :

No data available.

i) Specific target organ systemic toxicity - repeated exposure :

May cause severe damage to organs in the event of repeated or prolonged exposure.

j) Aspiration hazard :

No data available.

11.1.2.2 Other information

Symptoms related to the physical, chemical and toxicological characteristics

Exposure to vapours from solvents in the mixture in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms produced will include headaches, numbness, dizziness, fatigue, muscular asthenia and, in extreme cases, loss of consciousness.

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> Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 111-42-2 : IARC Group 2B : The agent is possibly carcinogenic to humans.

CAS 102-71-6 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

11.2. Information on other hazards

Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

> SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

> 12.1.1. Substances

BROMADIOLONE (ISO) (CAS: 28772-56-7)

Fish toxicity :

LC50 = 2.89 mg/l

Species : Oncorhynchus mykiss

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 5.79 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

PROPYLENE GLYCOL (CAS: 57-55-6)

Fish toxicity :

LC50 = 40613 mg/l

Species : Oncorhynchus mykiss

Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity :

EC50 = 18340 mg/l

Species : Ceriodaphnia dubia

Duration of exposure : 48 h

EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)

NOEC = 13030 mg/l

Species : Ceriodaphnia dubia

Duration of exposure : 7 days

Algae toxicity :

ECr50 = 19000 mg/l

Species : Pseudokirchnerella subcapitata

Duration of exposure : 96 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

BROMADIOLONE (ISO) (CAS: 28772-56-7)

Biodegradability :

no degradability data is available, the substance is considered as not degrading quickly.

PROPYLENE GLYCOL (CAS: 57-55-6)

Biodegradability :

no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

12.3.1. Substances

PROPYLENE GLYCOL (CAS: 57-55-6)

Octanol/water partition coefficient :

log K_{ow} = -1.07

OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

Bioaccumulation :

BCF = 0.09

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

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12.6. Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with environmental effects.

12.7. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

-

14.2. UN proper shipping name

-

14.3. Transport hazard class(es)

-

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

14.7. Maritime transport in bulk according to IMO instruments

-

SECTION 15 : REGULATORY INFORMATION

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

> Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2023/707.

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2024/2564. (ATP 22)

Container information:

Containers to be fitted with a tactile warning of danger (see EC Regulation No. 1272/2008, Annex II, Part 3).

Particular provisions :

No data available.

Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):
<https://echa.europa.eu/substances-restricted-under-reach>.

Authorisations agreed under Title VII of Regulation (EC) No.1907/2006 (REACH):

The mixture does not contain any substance subject to authorisation according to Annex XIV of REACH Regulation (EC) No 1907/2006:
<https://echa.europa.eu/fr/authorisation-list>.

Substances that deplete the ozone layer (EC Regulation No. 1005/2009, Montreal Protocol) :

The mixture does not contain any substance posing a risk to the ozone layer.

Persistent organic pollutants (POP) (Regulation (EU) 2019/1021):

The mixture does not contain a persistent organic pollutant.

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> PIC Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (Rotterdam Convention):

The mixture is subject to the Prior Informed Consent (PIC) procedure.
The mixture contains a substance subject to the export notification procedure requirement.
28772-56-7 BROMADIOLONE (ISO)

Explosives precursors :

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

Labelling for biocidal products (Regulation (UE) n° 528/2012) :

Name	CAS	%	Product-type
BROMADIOLONE (ISO)	28772-56-7	0.025 g/kg	14

Product-type 14 : Rodenticides.

15.2. Chemical safety assessment

No data available.

> SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

> Wording of the phrases mentioned in section 3 :

H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H330 Fatal if inhaled.
H360D May damage the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure .
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

> Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.
LC50 : The concentration of a test substance resulting in 50% lethality in a given period.
EC50 : The effective concentration of substance that causes 50% of the maximum response.
ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.
NOEC : The concentration with no observed effect.
REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.
ATE : Acute Toxicity Estimate
BW : Body Weight
CMR: Carcinogenic, mutagenic or reprotoxic.
UFI : Unique formulation identifier.
STEL : Short-term exposure limit
TWA : Moyenne pondérée dans le temps
TMP : French Occupational Illness table
TLV : Threshold Limit Value (exposure)
AEV : Average Exposure Value.
ADR : European agreement concerning the international carriage of dangerous goods by Road.
GHS08 : Health hazard
IATA : International Air Transport Association.
IMDG : International Maritime Dangerous Goods.
ICAO : International Civil Aviation Organisation
PBT: Persistent, bioaccumulable and toxic.
PIC: Prior Informed Consent.
POP: Persistent Organic Pollutant.
RID : Regulations concerning the International carriage of Dangerous goods by rail.
SVHC : Substances of very high concern.
AK-ertek : Permissible average concentration
WGK : Wassergefährdungsklasse (Water Hazard Class).
> Modification compared to the previous version