

SAPPHIRE GRAIN

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 : SAPPHIRE GRAIN
UFI : S68P-42SC-R00F-TCGH

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

Recommended use(s): Professional 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 : (GB) LODI UK .
Address : Building 69, Pensnett Trading Estate, Kingswinford.DY6 7FD.West Midlands.UNITED KINGDOM.
Telephone : 01 384 40 42 42. Fax : .
fds@lodi.fr
(NI) LODI SAS - PA des Quatre Routes 35390 Grand-Fougeray FRANCE

1.4. Emergency telephone number : 0844 892 011.

Association/Organisation : NPIS (National Poison Centre) - Birmingham Unit .

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.

Reproductive toxicity, Category 1B (Repr. 1B, H360D).
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 :

DANGER

Product identifiers :

EC 259-980-5 BRODIFACOUM (ISO)

Hazard statements :

H360D May damage the unborn child.

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

Precautionary statements - Prevention :

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/hearing protection/ ...

Precautionary statements - Response :

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

Precautionary statements - Storage :

P405 Store locked up.

Precautionary statements - Disposal :

P501 Dispose of contents/container according to the regulation.

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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.

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]	2.5 \leq x % < 10
INDEX: 607_172_00_1 CAS: 56073-10-0 EC: 259-980-5 BRODIFACOUM (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 = 10 Aquatic Chronic 1, H410 M Chronic = 10	[ii]	0 \leq 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_172_00_1 CAS: 56073-10-0 EC: 259-980-5 BRODIFACOUM (ISO)	Repr. 1B: H360D C $\geq 0.003\%$ STOT RE 1: H372 C $\geq 0.02\%$ STOT RE 2: H373 0.002% \leq C < 0.02%	inhalation: ATE = 3.05 mg/l (dust/mist) dermal: ATE = 3.16 mg/kg BW oral: ATE = 0.4 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 :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

Remove contaminated clothing, wash skin with soap and rinse thoroughly with water. Do not use solvents or thinners.

In the event of swallowing :

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention, showing the label.

Never give anything by mouth . Do not induce vomiting.

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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

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
- carbon dioxide (CO₂)

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.

6.3. Methods and material for containment and cleaning up

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

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.

Avoid exposure to pregnant women and warn women of child-bearing age of the possible risks

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

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.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.

Keep in a dry and cool place and ventilated.

Keep out of reach of children.

Keep away from food and drink and animal feeding stuffs.

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

No data available.

Occupational exposure limits :

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

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

Predicted no effect concentration (PNEC):

BRODIFACOUM (ISO) (CAS: 56073-10-0)

Environmental compartment: Soil.
PNEC : 0.88 mg/kg

Environmental compartment: Fresh water.
PNEC : 0.00004 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 0.000004 mg/l

Environmental compartment: Waste water treatment plant.
PNEC : 0.0038 mg/l

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.

Type of gloves recommended :

- PVA (Polyvinyl alcohol)

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- Butyl Rubber (Isobutylene-isoprene copolymer)

- 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.

Wear work clothing.

- 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 in granules.

Grain.

Colour

Blue.

Odour

Odour threshold : Not stated.

Cereals.

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) : Not stated.

Not 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 : 6.00

Neutral.

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 : 0.398 g/mL - 0.465 g/mL

Relative vapour density

Vapour density : Not stated.

9.2. Other information

No data available.

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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

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.

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.

Splashes in the eyes may cause irritation and reversible damage

Presumed human reproductive toxicant.

May damage the unborn child.

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

11.1.1. Substances

Acute toxicity :

BRODIFACOUM (ISO) (CAS: 56073-10-0)

Oral route :

LD50 = 0.4 mg/kg bodyweight/day

Species : Mouse

Dermal route :

LD50 = 3.16 mg/kg bodyweight/day

Species : Rat

Inhalation route (Dusts/mist) :

LC50 = 3.05 mg/m³

Species : Rat

PROPYLENE GLYCOL (CAS: 57-55-6)

Oral route :

LD50 = 22000 mg/kg bodyweight/day

Species : Rat

Dermal route :

LD50 > 2000 mg/kg bodyweight/day

Species : Rabbit

Inhalation route (Dusts/mist) :

LC50 > 317042 mg/l

Species : Rabbit

Skin corrosion/skin irritation :

PROPYLENE GLYCOL (CAS: 57-55-6)

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

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Serious damage to eyes/eye irritation :

PROPYLENE GLYCOL (CAS: 57-55-6)

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

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)

Germ cell mutagenicity :

PROPYLENE GLYCOL (CAS: 57-55-6)

No mutagenic effect.

Carcinogenicity :

PROPYLENE GLYCOL (CAS: 57-55-6)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

11.1.2. Mixture

No toxicological data available for the mixture.

11.2. Information on other hazards

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 3844-45-9 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

BRODIFACOUM (ISO) (CAS: 56073-10-0)

Fish toxicity :

LC50 = 0.04 mg/l

Factor M = 10

Species : Oncorhynchus mykiss

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 0.25 mg/l

Factor M = 1

Species : Daphnia magna

Duration of exposure : 48 h

Algae toxicity :

ECr50 0.04 mg/l

Duration of exposure : 72 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)

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12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

BRODIFACOUM (ISO) (CAS: 56073-10-0)

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

No data available.

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.

12.6. Endocrine disrupting properties

No data available.

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.

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

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

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

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14.7. Maritime transport in bulk according to IMO instruments

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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. 2022/692 (ATP 18)

Container information:

No data available.

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

The mixture contains at least one restricted substance under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): <https://echa.europa.eu/substances-restricted-under-reach>. Please refer to Section 3 to identify the substance involved.

For professional users only.

Particular provisions :

No data available.

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

Name	CAS	%	Product-type
BRODIFACOUM (ISO)	56073-10-0	0.05 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

PNEC : Predicted No-Effect Concentration

CMR: Carcinogenic, mutagenic or reprotoxic.

UFI : Unique formulation identifier.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

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.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

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GHS08 : Health hazard

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.