KLERAT 20G WAX BLOCKS

Version 3 - This version replaces all previous versions.
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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : **KLERAT 20G WAX BLOCKS**

Design code : A12720B

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

Use : Rodenticide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta Crop Protection AG
Postfach
CH-4002 Basel
Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

E-mail address : sds.ch@syngenta.com

1.4 Emergency telephone number

Emergency telephone number : +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Not classified according to EU legislation

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Remarks : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Hazardous components which must be listed on the label:

Labelling: EU Directives 67/548/EEC or 1999/45/EC

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards

May form flammable dust-air mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
brodifacoum	56073-10-0 259-980-5	T+, N R26/27/28 R43 R48/24/25 R50/53	Acute Tox.1; H300 Acute Tox.1; H310 Acute Tox.1; H330 Skin Sens.1; H317 STOT RE1; H372 Aquatic Acute1; H400 Aquatic Chronic1; H410	0.005 % W/W

Substances for which there are Community workplace exposure limits.
For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.

Inhalation : Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or poison control centre immediately.

Skin contact : Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required.

Ingestion : Take victim immediately to hospital.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Symptoms of poisoning are typical of anticoagulants. In severe cases there may be bruising, haematomas of the joints, blood in the faeces and urine

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice : This product contains anticoagulants with an effect similar to warfarin in that they act by interfering with the synthesis of prothrombin.
The specific measure of effect is the prothrombin time. Note this may not become prolonged until 12-18 hours after ingestion.
The specific antidote is vitamin K1 (Phytomenandione).
Antidote must be administered under medical supervision.
Initially, antidote should be given by injection (10-20mg, or 0.25mg/kg for children), by slow intravenous infusion at a rate not exceeding 1mg/minute. In severe cases the use of fresh frozen plasma may be required.
Maintenance treatment is given orally (40mg/day in divided doses for adults; up to 20mg/day in divided doses for children).
The prothrombin time and the haemoglobin should be monitored. Patients should be kept under medical supervision until the prothrombin time has been normal for 3 consecutive days.
Oral treatment may need continuing for several months (20mg/day in divided doses for adults and up to 20mg/day in divided doses for children).
(For animal cases the dose is 2-5mg/kg).

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus.

Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8.
Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
Do not create a powder cloud by using a brush or compressed air.
Clean contaminated surface thoroughly.

If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special protective measures against fire required.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of the reach of children.
Keep away from food, drink and animal feedingstuffs.

: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Registered Crop Protection products:For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
brodifacoum	0.002 mg/m3	8 h TWA	SYNGENTA

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

Engineering measures : Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.
The extent of these protection measures depends on the actual risks in use.
If airborne dust is generated, use local exhaust ventilation controls.
Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.
Where necessary, seek additional occupational hygiene advice.

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.
When selecting personal protective equipment, seek appropriate professional advice.
Personal protective equipment should be certified to appropriate standards.

Respiratory protection : No personal respiratory protective equipment normally required.
A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection : Chemical resistant gloves are not usually required.
Select gloves based on the physical job requirements.

Eye protection : Eye protection is not usually required.
Follow any site specific eye protection policies.

Skin and body protection : No special protective equipment required.
Select skin and body protection based on the physical job requirements.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state : solid
Form : solid
Colour : dark blue
Odour : no data available
Odour Threshold : no data available

pH	:	no data available
Melting point/range	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	not highly flammable
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Density	:	1.2 g/cm3
Solubility in other solvents	:	not soluble in Water
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	252 °C
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	Not explosive
Oxidizing properties	:	not oxidizing

9.2 Other information

Minimum ignition temperature	:	350 °C
Dust explosion class	:	Forms flammable dust clouds.
Minimum ignition energy	:	0.3 - 1 J
Burning number	:	5 at 100 °C
	:	2 at 20 °C

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical stability

No information available.

10.3 Possibility of hazardous reactions

None known.
Hazardous polymerisation does not occur.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity : Acute toxicity estimate male and female rat, > 5,000 mg/kg
Derived from components.

Acute inhalation toxicity : Acute toxicity estimate , > 5.0 mg/l
Derived from components.

Acute dermal toxicity : Acute toxicity estimate male and female rat, > 5,000 mg/kg
Derived from components.

Skin corrosion/irritation : rabbit: Non-irritating
Derived from components.

Serious eye damage/eye irritation : rabbit: Non-irritating
Derived from components.

Respiratory or skin sensitisation
brodifacoum : guinea pig: A skin sensitizer in animal tests.

Germ cell mutagenicity
brodifacoum : Did not show mutagenic effects in animal experiments.

Carcinogenicity
brodifacoum : Did not show carcinogenic effects in animal experiments.

Teratogenicity
brodifacoum : Did not show teratogenic effects in animal experiments.

Reproductive toxicity
brodifacoum : Did not show reproductive toxicity effects in animal experiments.

STOT - repeated exposure
brodifacoum : Causes damage to organs through prolonged or repeated exposure.

Further information
brodifacoum : Excessive exposure slows blood clotting time and can cause bleeding, shock and death.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout), > 100 mg/l , 96 h
Derived from components.

Toxicity to aquatic invertebrates : EC50 Daphnia magna (Water flea), > 100 mg/l , 48 h
Derived from components.

Toxicity to aquatic plants : EC50 Pseudokirchneriella subcapitata (green algae), > 100 mg/l , 72 h
Derived from components.

12.2 Persistence and degradability

Stability in water
brodifacoum : Degradation half life: ca. 300 d
Persistent in water.

Stability in soil
brodifacoum : Degradation half life: 157 d
Not persistent in soil.

12.3 Bioaccumulative potential

brodifacoum : Brodifacoum has high potential to bioaccumulate.

12.4 Mobility in soil

brodifacoum : Brodifacoum has low mobility in soil.

12.5 Results of PBT and vPvB assessment

brodifacoum : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

None known.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Triple rinse containers.

Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Land transport (ADR/RID)

Not dangerous goods

14.1 UN number:	not applicable
14.2 UN proper shipping name:	not applicable
14.3 Transport hazard class(es):	not applicable
14.4 Packing group:	not applicable
14.5 Environmental hazards	not applicable

Sea transport(IMDG)

Not dangerous goods

14.1 UN number:	not applicable
14.2 UN proper shipping name:	not applicable
14.3 Transport hazard class(es):	not applicable
14.4 Packing group:	not applicable
14.5 Environmental hazards	not applicable

Air transport (IATA-DGR**)**

Not dangerous goods

14.1 UN number:	not applicable
14.2 UN proper shipping name:	not applicable
14.3 Transport hazard class(es):	not applicable
14.4 Packing group:	not applicable

14.6 Special precautions for user

none

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15. REGULATORY INFORMATION

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

GHS-Labelling
Remarks : Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

Hazardous components which must be listed on the label:

15.2 Chemical Safety Assessment
A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION

Further information

Full text of R-phrases referred to under sections 2 and 3:

R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R43	May cause sensitisation by skin contact.
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
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.

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.