MATERIAL SAFETY DATA SHEET CHLOROPHACINONE 0,25%

Date: Rev. December 2012

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

1.1 Identification of the preparation: Chlorophacinone 0,25%

1.2 Use of the preparation: The preparation is used as a raw material in the formulation of rodenticide baits.

1.3 Company identification:

DYNAMIC AGRIBUSINESS SDN BHD
No 11-2(1st Floor),Jalan Meranti SD 13/4,
Bandar Sri Damansara,
52200 Kuala Lumpur.
Tel 03-6272 1678,6272 9308
Fax 03-6272 9528

1.4 Emergency telephone:

1.5 Mail safety data sheet maker

2. # HAZARD IDENTIFICATION

In accordance with the EC classification principles, the preparation is classified as harmful if swallowed or in contact with skin.

Health risks: The preparation is an anticoagulant and the risk is a possible internal haemorrhage.
- Harmful if in contact with skin; it can be absorbed and could cause the above mentioned damages.
- Harmful if swallowed; serious risk of internal haemorrhage.

Environment risks: Harmful for the environment

3. # COMPOSITION

The preparation contains:

Polyethylene glycols (not dangerous): As diluents.
Chlorophacinone (active ingredient): 0,25%
2-[2-(4-chlorophenyl)-2-phenylacetyl]indan-1,3-dione
N. CAS 3691-35-8 EEC n. 233-003-0 UE Index N.606-014-009

Symbols : T+; N R Phrases: 23-27/28-48/24/25-50/53

4. FIRST-AID MEASURES

General indications: In any case, it's better to seek medical advice.
Do not give any substance through mouth to unconscious people.

- Skin contact: Wash skin immediately with soap and plenty of water.
- Eye contact: Flush eyes immediately with plenty of water for at least 15/20 minutes lifting eye lids. If eyes are still red and there is still nuisance, consult an ophthalmologist.
- Ingestion: Flush mouth with water.
- Inhalation: Bring person to open air.

Advice for the doctor: the preparation is an anticoagulant and its effects can persist for a long time.

It is advisable:

1. To check the prothrombinic activity many times, also after a few days, particularly if the quantity swallowed is high. The antidote is vitamin K: the medicine has to be given intramuscularly, only if alterations in the prothrombinic activity appear and not preventively.
2. In animals and particularly in pets, vitamin K can be given even in absence of alterations of the coagulation, because of the gravity of the haemorrhage which can appear in case of ingestion.

5. FIRE-FIGHTING MEASURES

▪ Suitable extinguishing media:	Inert gases, foam and chemical powders, CO_2.
▪ Extinguishing media which must not be used for safety reasons:	Water.
▪ Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:	Toxic gases.
▪ Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL-RELEASE MEASURES

▪ Personal precautions:	Wear suitable gloves, glasses and protective clothing.
▪ Environmental precautions:	Avoid that the product reaches drains, water drains and penetrates into the soil. If waters or drains are polluted, inform immediately the competent Authorities.
▪ Methods for cleaning up:	Pick up accurately with adsorbent material, don't wash with water.

7. HANDLING AND STORAGE

7.1 Handling:	Use all the individual precautions provided to avoid contact.
7.2 Storage:	Keep container tightly closed in cool and dry places, far from unauthorized people and far from foods.
7.3 Specific uses:	---

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Limit values for the exposition not being available it is advisable to follow these precautions:

▪ Respiratory protection:	Necessary in case of aerosol.
▪ Hand protection:	Gloves for chemical products. Foresee periodic substitution.
▪ Eye protection :	Goggles for chemical products.

- Skin protection: Protective clothes. Foresee periodic substitution.

All the usual precautions for handling chemical products have to be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General Information

Physical state:	Liquid.
Colour:	Indicated on the label (it can be red or blue or without any added colour).
Odour:	Not perceptible.

9.2 Important health, safety and the environmental information

pH:	7-9
Boiling point:	190° C
Flash point:	> 120°C
Flammability:	---
Explosive properties:	---
Oxidising properties:	---
Vapour pressure:	---
Relative density:	1010-1100 g/l
Solubility	
- water solubility:	Soluble
- fat solubility:	Soluble in various organic solvents
Partition coefficient: n-octanol/water:	---
Viscosity:	---
Vapour density:	---
Evaporation rate:	---

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid:	Exposure to high temperatures.
10.2 Materials to avoid:	Strong oxidant agents.
10.3 Hazardous decomposition products:	Thermic decomposition can produce toxic exhalations (carbon oxides).

11. TOXICOLOGICAL INFORMATION

- Oral toxicity: LD_{50} acute oral rat of active ingredient: 3,1 mg/kg (WHO)
  LD_{50} experimental for the present preparation: > 2.000 mg/kg (BIOLAB)
- Acute dermal toxicity: LD_{50} higher than 2.000 mg/kg (BIOLAB)
- Inhalation toxicity: Not foreseen
- Harmful effects: The preparation contains a substance with anticoagulant effect and may cause internal haemorrhages, even delayed.

12. ECOLOGICAL INFORMATION

Toxic effects on fish, plankton and other organisms. Limited risk for the waters.

12.1 Ecotoxicity

- Fish*: At the dosage of 100 mg/l, during the 96 hours of observation no symptom of toxicity has appeared and no death has occurred (Report no. 95/11595 Biolab).
- Algae*: At the dosage of 100 mg/l there is no difference in the growing of the algae (Report no. 95/11594 Biolab).
- Daphnia*: Cl_{50} is > 100 mg/l (Report no. 95/11593 Biolab) **reports refer to "Concentrate 0,25%"*

Ecotoxicity of Technical Chlorophacinone: LC50 (96h) Rainbow trout 0,35mg/l (Rif. Directive 2006/8/EC)

12.2 Mobility

Absorption coefficient of the active ingredient is Koc = 275; classification: low leaching (Technical Report N. 1 14/07/1997 Chemservice).

12.3 Persistence and degradability

The active ingredient is scarcely degradable.

12.4 Bioaccumulative potential

The active ingredient has Pow: > 1000 (Study CH-14/96-B Chemservice).

12.5 Other adverse effects

Not available.

13. DISPOSAL CONSIDERATIONS

- Disposal: Arrange disposal by incineration or with other approved suitable treatments.
- Container disposal: Elimination or recycling according with the local Authority Regulations

Follow in any case the local Authority Regulations.

14. TRANSPORT INFORMATION

The transport of this product is subject to the regulations for "dangerous products".
Definition: organochlorine pesticide, liquid, toxic (Chlorophacinone 2,5%).

Rail and road transport RID/ADR	N.A.
Sea shipment IMDG	N.A.
Air shipment IATA	N.A.

15. REGULATORY INFORMATION

EC labelling and classification

- Danger symbol:	Xn	
- R Phrases:	R 21/22	Harmful in contact with skin and if swallowed
	R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- S Phrases:	S 13	Keep away from food, drink and animal feedinstuffs
	S36/37	Wear suitable protective clothing and gloves.
	S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S 60	This material and its container must be disposed of as hazardous waste.
	S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

Complete text of the R Phrases indicated in Section 3:

R 23:	Toxic by inhalation.
R 27/28:	Very toxic in contact with skin and if swallowed.
R 48/24/25:	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R 50/53:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

N.B. On request, the preparation can contain 0,05% Bitrex® (denatonium benzoate) as a "repulsive agent" in order to prevent accidental ingestion of the finished baits (Directive 98/8/EC art. 20 2-b).

Bibliography: - *The Pesticide Manual* 12th Ed.
- *ANTICOAGULANTS RODENTICIDE* Envir. Health Criteria 175 W.H.O. Geneva 1995
- Reports from "BiolabSpA"- Vimodrone (MILANO)
- "The WHO recommended classification of pesticide..." WHO/PCS/96.3
- ChemService Studies, Novate Milanese, Milano

Updating: This sheet was updated according to the regulations in force (see date on the upper right part of each page).
Changes and/or additions to the previous sheet are indicated by the symbol #.

The information of this Material Safety Data Sheet is based on our present knowledge and on the EEC regulations. The product must not be used for purposes which are different from the ones specified. It is the user's responsibility to take all the necessary measures in order to follow the local and national regulations.

The present sheet deletes and substitutes all previous editions