

Material Safety Data Sheet

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Version 1.2

According to 91/155/EEC

1 - Product and Company Information

Product Name BENODICARB PESTANAL
(2,3-ISOPROPYLIDENDIOXYPHENYL
N-METHYLCARBAMATE), 250 MG

Product Number 45336

Company Sigma-Aldrich Sweden AB
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S-13570 Stockholm

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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
BENDIOCARB PESTANAL	22781-23-3	245-216-8	006-046-00-8

Formula C11H13NO4
Molecular Weight 223.2 AMU
Synonyms Bencarbate * Bendiocarb * Bendiocarbe *
1,3-Benzodioxole,
2,2-dimethyl-4-(N-methylaminocarboxylato)- *
1,3-Benzodioxole,
2,2-dimethyl-4-(N-methylcarbamato)- *
1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
methylcarbamate * Carbamic acid, methyl-,
2,3-(isopropylidenedioxy)phenyl ester *
2,2-Dimethyl-1,3-benzdioxol-4-yl
N-methylcarbamate *
2,2-Dimethyl-1,3-benzodioxol-4-ol
methylcarbamate *
2,2-Dimethylbenzo-1,3-dioxol-4-yl
methylcarbamate * Dycarb * Ficam * Ficam D *
Ficam ULV * Ficam W * Ficam 80W * Fisons NC 6897
* Garvox * 2,3-Isopropylidene-dioxyphenyl
methylcarbamate * Methylcarbamic acid
2,3-(isopropylidenedioxy)phenyl ester * Multamat
* Multimet * NC6897 * Niomil * OMS-1394 * Rotate
* Seedox * Seedox 80W * Tatoo * Turcam

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful in contact with skin. Toxic by inhalation and if
swallowed. Very toxic to aquatic organisms, may cause long-term
adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Store in a cool dry place.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after

handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	128 - 130 °C	
Flash Point	> 100 °C	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: Insoluble.	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: FC1140000

ACUTE TOXICITY

LD50
Oral
Rat
40 mg/kg

LD50
Skin

Rat
566 mg/kg

LD50
Oral
Mouse
45 mg/kg

LD50
Oral
Rabbit
35 mg/kg

LD50
Oral
Guinea pig
35 mg/kg

LD50
Oral
Quail
21 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

LD50
Oral
Mammal
35 mg/kg

SIGNS AND SYMPTOMS OF EXPOSURE

Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites. Exposure can cause: Headache. Nausea. Vomiting. Dizziness. Drowsiness. Confusion. Weakness. Muscle cramps/spasms. Change in pupil size. Fever. Seizures. Incoordination. Convulsions. Coma.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: Harmful if absorbed through skin.
Eye Contact: May cause eye irritation.
Inhalation: Toxic if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: Toxic if swallowed.

TARGET ORGAN INFORMATION

Central nervous system. Heart. Blood. Eyes.

12 - Ecological Information

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: Yes
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 006-046-00-8

INDICATION OF DANGER: T N

Toxic. Dangerous for the environment.

R-PHRASES: 21 23/25 50/53

Harmful in contact with skin. Toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 22 36/37 45 60 61

Do not breathe dust. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

SWITZERLAND

SWISS POISON CLASS: 3

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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