



BANOL® FUNGICIDE

Version 4 / USA
102000000806

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Revision Date: 01/16/2014
Print Date: 03/25/2015

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

Product identifier

Trade name BANOL® FUNGICIDE
Product code (UVP) 05933765
SDS Number 102000000806
EPA Registration No. 432-942

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

Use Fungicide
Restrictions on use See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

All Emergencies, 24hr/ 7 days 1-800-334-7577 (24 hours/day)

Product Information Telephone No. 1-800-331-2867

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Skin sensitisation : Category 1B
Acute toxicity (Oral): Category 4



Signal word: Warning

Hazard statements

May cause an allergic skin reaction.
Harmful if swallowed.

Precautionary statements

Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF ON SKIN: Wash with plenty of soap and water.



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If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Propamocarb hydrochloride	25606-41-1	66.50

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation

Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms

The following symptoms may occur: Lethargy, Ataxia, Spasm

Indication of any immediate medical attention and special treatment needed

Risks

This product, although being a carbamate, is NOT a cholinesterase inhibitor.



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Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.
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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media	
Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Hydrogen chloride (HCl), Nitrogen oxides (NOx)
Advice for firefighters	
Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Autoignition temperature	The product is not self-ignitable.
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable



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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. Contaminated soil may have to be removed and disposed.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Propamocarb hydrochloride	25606-41-1	1.1 mg/m ³ (TWA)		OES BCS*



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Propamocarb hydrochloride	25606-41-1	5 ug/m3 (AN ESL)	07 2011	TX ESL
Propamocarb hydrochloride	25606-41-1	50 ug/m3 (ST ESL)	07 2011	TX ESL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection Chemical resistant gloves made of waterproof material such as polyethylene or polyvinyl chloride

Eye protection Tightly fitting safety goggles

Skin and body protection Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance colourless to light yellow

Physical State liquid, clear

Odor slightly perceptible

Odour Threshold no data available

pH 2.0 - 4.0 (100 %) at 23 °C

Vapor Pressure no data available

Vapor Density (Air = 1) no data available

Density ca. 1.09 g/cm³ at 20 °C

Evaporation rate no data available



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Boiling Point	ca. 100 °C / 212 °F
Melting / Freezing Point	no data available
Water solubility	completely miscible
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	34.23 mPa.s at 20 °C
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Autoignition temperature	The product is not self-ignitable.
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition not applicable

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials no data available



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Hazardous decomposition products No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Ingestion, Skin Absorption, Inhalation

Immediate Effects

Eye Moderate eye irritation.

Skin Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity LD50 (male rat) 2,900 mg/kg
LD50 (female rat) 2,000 mg/kg

Acute inhalation toxicity LC50 (male/female combined rat) > 7.9 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

LC50 (male/female combined rat) > 31.6 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Acute dermal toxicity LD50 (male/female combined rat) > 3,000 mg/kg

Skin irritation Slight irritation (rabbit)

Eye irritation Mild eye irritation. (rabbit)

Sensitisation Sensitising
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment repeated dose toxicity
Propamocarb hydrochloride did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity
Propamocarb hydrochloride was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
Propamocarb hydrochloride was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH



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None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Propamocarb hydrochloride did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Propamocarb hydrochloride caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Propamocarb hydrochloride are related to maternal toxicity.

Further information

Only acute toxicity studies have been performed on the formulated product.

The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish

LC50 (Lepomis macrochirus (Bluegill sunfish)) > 92 mg/l
static test; Exposure time: 96 h
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

Toxicity to aquatic invertebrates

EC50 (Water flea (Daphnia magna)) > 106 mg/l
static test; Exposure time: 48 h
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

Toxicity to aquatic plants

IC50 (Pseudokirchneriella subcapitata) > 85 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient propamocarb-hydrochloride.

Biodegradability

Propamocarb hydrochloride: rapidly biodegradable

Koc

Propamocarb hydrochloride: Koc:719

Bioaccumulation

Propamocarb hydrochloride:
Does not bioaccumulate.

Mobility in soil

Propamocarb hydrochloride: Slightly mobile in soils



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Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Do not contaminate water, food, or feed by disposal.
Dispose in accordance with all local, state/provincial and federal regulations.
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

Contaminated packaging Do not re-use empty containers.
Triple rinse containers.
Puncture container to avoid re-use.
Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

RCRA Information Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-942



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US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

None.

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Propamocarb hydrochloride 25606-41-1

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed or absorbed through skin.
Moderate eye irritation.
Avoid contact with skin, eyes and clothing.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16: OTHER INFORMATION

Bayer Environmental Science

SAFETY DATA SHEET



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NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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