

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 13, 2017

Revision Date: Aug 13, 2017

1. Identification

1.1 GHS Product identifier

Product name chlorpropham

1.2 Other means of identification

Product number -

Other names isopropyl 3-chlorocarbanilate

1.3 Recommended use of the chemical and restrictions on use

Identified uses For industry use only.

Uses advised against no data available

Company XiXisys.com

Address XiXisys.com

Telephone XiXisys.com

Fax XiXisys.com

Emergency phone
number -

Service hours Monday to Friday, 9am-5pm (Standard time zone:
UTC/GMT +8 hours).

2. Hazard identification

2.1 Classification of the substance or mixture

Carcinogenicity, Category 2

Specific target organ toxicity – repeated exposure, Category 2

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

2.2 GHS label elements, including precautionary statements

Pictogram(s)

Signal word

Warning

Hazard statement(s)

H351 Suspected of causing cancer

H373 May cause damage to organs through prolonged or repeated exposure

H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

Response

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

P314 Get medical advice/attention if you feel unwell.

P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

| Chemical name | Common names and synonyms | CAS number | EC number | Concentration |
|---------------|---------------------------|------------|-----------|---------------|
| chlorpropham | chlorpropham | 101-21-3 | none | 100% |

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Fresh air, rest.

In case of skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

If swallowed

Give one or two glasses of water to drink.

4.2 Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 171 [Substances (Low to Moderate Hazard)]: Inhalation of material may be harmful. Contact may cause burns to skin and eyes. Inhalation of Asbestos dust may have a damaging effect on the lungs. Fire may produce irritating, corrosive and/or toxic gases. Some liquids produce vapors that may cause dizziness or suffocation. Runoff from fire control may cause pollution. (ERG, 2016)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Skin contamination should be treated promptly by washing with soap and water. Contamination of the eyes should be treated immediately by prolonged flushing of the eyes with large amounts of clean water. If dermal or ocular

irritation persists, medical attention should be obtained without delay. /Other Herbicides/

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguish fire using agent suitable for type of surrounding fire. Material itself does not burn or burns with difficulty. /Carbaryl (agricultural insecticides, nec, liquid); Carbaryl (agricultural insecticides, nec, other than liquid); Carbaryl (insecticides, other than agricultural, nec/

5.2 Specific hazards arising from the chemical

Flash point data for this chemical are not available, however it is probably combustible.

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers.

6.3 Methods and materials for containment and cleaning up

A system for removing pesticides from the wash water produced by pesticide applicators as they clean their equipment has been developed. The first step is the flocculation/coagulation and sedimentation of the pesticide-contaminated wash water. The supernatant from the first step is then passed through activated carbon columns. /Pesticides/

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and

dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

| | |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Physical state | beige to brown solid |
| Colour | Colorless solid |
| Odour | Faint characteristic odor |
| Melting point/ freezing point | 41°C |
| Boiling point or initial boiling point and boiling range | 247°C |
| Flammability | Combustible under specific conditions. Liquid formulations containing organic solvents may be flammable. |
| Lower and upper explosion limit / flammability limit | no data available |
| Flash point | 105.7°C |
| Auto-ignition temperature | no data available |
| Decomposition temperature | 247°C |
| pH | no data available |
| Kinematic viscosity | no data available |
| Solubility | In water:0.009 g/100 ml very poor |
| Partition coefficient n-octanol/water (log value) | log Kow= 3.51 |
| Vapour pressure | 0.000173mmHg at 25°C |
| Density and/or relative density | 1.18 |
| Relative vapour density | no data available |
| Particle characteristics | no data available |

10. Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Unlimited shelf life; not light or heat sensitive, but low temperature may cause crystallization of emulsifiable concentrate.

10.3 Possibility of hazardous reactions

ISOPROPYL-N-(3-CHLOROPHENYL)CARBAMATE is a carbamate ester. Carbamates are chemically similar to, but more reactive than amides. Like amides they form polymers such as polyurethane resins. Carbamates are incompatible with strong acids and bases, and especially incompatible with strong reducing agents such as hydrides. Flammable gaseous hydrogen is produced by the combination of active metals or nitrides with carbamates. Strongly oxidizing acids, peroxides, and hydroperoxides are incompatible with carbamates.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

When heated to decomposition it emits highly toxic fumes of /hydrogen chloride, nitrogen oxides and phosgene/.

11. Toxicological information

Acute toxicity

- Oral: LC50 Rat oral 1200 mg/kg
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Cancer Classification: Group E Evidence of Non-carcinogenicity for Humans

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 *Micropterus salmoides* (Largemouth bass) 10 mg/L/48 hr; static
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

SOIL MICROORGANISMS READILY DEGRADE CHLORPROPHAM ... BY PRODN OF 3-

CHLOROANILINE BY ENZYMATIC HYDROLYSIS REACTION WITH SUBSEQUENT LIBERATION OF FREE CHLORIDE ION & CARBON DIOXIDE. ... PSEUDOMONAS STRIATA CHESTER, A FLAVOBACTERIUM SP, AN AGROBACTERIUM SP, & ACHROMOBACTER SP /DEGRADE IT/. ... BIOASSAY TESTS INDICATE HALF LIFE OF CHLORPROPHAM TO BE ABOUT 65 DAYS @ 15 DEG C & 30 DAYS @ 29 DEG C. HOWEVER, RATE OF DISSIPATION CAN VARY GREATLY WITH MICROBIAL ACTIVITY & MOISTURE LEVEL OF GIVEN SOIL.

12.3 Bioaccumulative potential

An estimated BCF of 100 was calculated for chlorpropham(SRC), using a log Kow of 3.51(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC).

12.4 Mobility in soil

Koc values for chlorpropham ranging from 245 to 816 have been reported(1-4). According to a classification scheme(5), these Koc values suggest that chlorpropham is expected to have moderate to low mobility in soil. Leaching of chlorpropham from three different types of soil was low(6). More than 90% of recovered chlorpropham was found in the upper inch of the soil profile after 4 cm of rain(6). Very little chlorpropham adsorbs to montmorillonite or kalonite clay(7).

12.5 Other adverse effects

no data available

13. Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill.

Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. Transport information

14.1 UN Number

ADR/RID: UN3077

IMDG: UN3077

IATA: UN3077

14.2 UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

14.4 Packing group, if applicable

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG: yes

IATA: yes

14.6 Special precautions for user

no data available

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

no data available

15. Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

| Chemical name | Common names and synonyms | CAS number | EC number |
|------------------------------------------------------------------------|---------------------------|------------|-----------|
| chlorpropham | chlorpropham | 101-21-3 | none |
| European Inventory of Existing Commercial Chemical Substances (EINECS) | | | Listed. |

| | |
|--------------------------------------------------------------------------|-------------|
| EC Inventory | Listed. |
| United States Toxic Substances Control Act (TSCA) Inventory | Not Listed. |
| China Catalog of Hazardous chemicals 2015 | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC) | Listed. |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | Not Listed. |
| Vietnam National Chemical Inventory | Not Listed. |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) | Listed. |

16. Other information

Information on revision

Creation Date Aug 13, 2017
Revision Date Aug 13, 2017

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website:
<http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website:
<https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website:

<http://www.iarc.fr/>

- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website:
<http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website:
<http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website:
<http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.