

MATERIAL SAFETY DATA SHEET

Revision Date : 2017-01-01

1. IDENTIFICATION OF THE SUBSTANCE/TREPARATION AND THE COMPANY/UNDERTAKING

Flutamide

Product name:

Supplier:

BINBO BIOLOGICAL CO.,LTD FENGCHENG ONE ROAD Xi'an China +86-13488214511

Tel:

2.COMPOSITION/INFORMATION ON INGREDIENTS

| Components | ACGIH Exposure Limits: | OSHA Exposure Limits: |
|------------|------------------------|-----------------------|
| Flutamide | None | None |

3.HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May cause skin irritation and/or dermatitis

| Principle routes of exposure: | Skin | |
|-------------------------------|---|--|
| Inhalation: | May cause irritation of respiratory tract | |
| Ingestion: | May be harmful if swallowed | |
| Skin contact: | May cause allergic skin reaction | |
| Eye contact: | Avoid contact with eyes | |

Statements of hazard MAY CAUSE ALLERGIC SKIN REACTION.

Statements of Spill of Leak Label Eliminate all ignition sources. Absorb and/or contain spill with inert materials (e.g., sand, vermiculite). Then place in appropriate container. For large spills, use water spray to disperse vapors, flush spill area. Prevent runoff from entering waterways or sewers.

4. FIRST AID MEASURES

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| General advice: | In the case of accident or if you fell unwell, seek medical advice immediately (show the label where possible). Move to fresh air, call a physician immediately. |
|--|---|
| Inhalation: Skin contact: | Rinse immediately with plenty of water and seek medical advice Do not induce vomiting without medical advice. In the case of contact with eyes, rinse immediately with |
| Ingestion: | plenty of water and seek medical advice. |
| Eye contact: | No information available |
| Protection of first – aiders: | |
| Medical conditions aggravated by exposure: | None known |

5.FIRE-FIGHTING MEASURES

| Suitable extinguishing media: Specific hazards: Special protective equipment for firefighters: | Use dry chemical, CO2, water spray or "alcohol" foam Burning produces irritant fumes. |
|--|---|
| Flash point: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear |
| Autoignition temperature: NFPA rating | Not determined |
| NFPA Health: NFPA Flammability: NFPA Reactivity: | 1 1 0 |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Environmental precautions: Methods for cleaning up: Use personal protective equipment. Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal

7. HANDLING AND STORAGE



Storage:

Room temperature **Handling:**

Safe handling advice: Incompatible products: Use only in area provided with appropriate exhaust ventilation.

Wear personal protective equipment. Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Engineering measures: | Ensure adequate ventilation. | |
|---------------------------|--|--|
| Respiratory protection: | Breathing apparatus only if aerosol or dust is formed. | |
| Skin and body protection: | Usual safety precautions while handling the product will | |
| | provide adequate protection against this potential effect. | |
| | Safety glasses with side-shields | |
| Eye protection: | PVC or other plastic material gloves | |
| Hand protection: | Handle in accordance with good industrial hygiene and | |
| Hygiene measures: | safety practice. | |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Melting point/range: | No Data available at this time. |
|---------------------------|---------------------------------|
| Boiling point/range: | No Data available at this time. |
| Density: | No data available |
| Vapor pressure: | No data available |
| Evaporation rate: | No data available |
| Vapor density: | No data available |
| Solubility (in water): | No data available |
| Flash point: | Not determined |
| Autoignition temperature: | Not determined |
| | |

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Polymerization: None under normal processing.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours such as carbon oxides.



Materials to avoid: Strong oxidising agents.

Conditions to avoid: Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product information

Acute toxicity

| Components | RTECS Number: | Selected LD50s and LC50s |
|------------|---------------|--------------------------|
| Flutamide | Not Available | Not Determined |
| | | |

| Chronic toxicity: | Chronic exposure may cause nausea and vomiting, |
|------------------------|---|
| | higher exposure causes unconsciousness. |
| Local effects: | Symptoms of overexposure may be headache, |
| | dizziness, tiredness, nausea and vomiting. |
| Specific effects: | May include moderate to severe erythema (redness) |
| | and moderate edema (raised skin), nausea, vomiting, |
| | headache. |
| Primary irritation: | No data is available on the product itself. |
| Carcingenic effects: | No data is available on the product itself. |
| Mutagenic effects: | No data is available on the product itself. |
| Reproductive toxicity: | No data is available on the product itself. |
| | |

12. ECOLOGICAL INFORMATION

| Mobility: | No data available |
|----------------------|--|
| Bioaccumulation: | No data available |
| Ecotoxicity effects: | No data available |
| Aquatic toxicity: | May cause long-term adverse effects in the aquatic |
| | environment. |

| Components | U.S. DOT –Appendix B – | | - |
|------------|------------------------|---------------------------|----------------------------|
| | Marine Pollutants | Severe Marine Pollutants | List: |
| Flutamide | Not Listed | Not Listed | Not Listed |
| | | | |
| Components | Germany VCI (WGK) | World Health Organization | Ecotoxicity – Fish Species |



| | | (WHO) – Drinking Water | Data |
|------------|---------------------------|------------------------|-----------------------------|
| Flutamide | Not Listed | Not Listed | Not Listed |
| | 1 | | |
| Components | Ecotoxicity – Freshwater | Ecotoxicity – Microtox | Ecotoxicity – Water Flea |
| | Algae Data | Data | Data |
| Flutamide | Not Listed | Not Listed | Not Listed |
| | | | |
| Components | EPA – ATSDR Priority List | EPA – HPV Challenge | California – Priority Toxic |
| | | Program Chemical List | Pollutants |
| Flutamide | Not Listed | Not Listed | Not Listed |

13. DISPOSAL CONSIDERATIONS

| 14. TRANSPORT INFFORMATION | |
|--------------------------------------|---|
| Contaminated packaging: | Do not re-use empty containers. |
| | hazardous. |
| | from fires extinguished with this material may be |
| | local hazardous waste regulatory authority. Residue |
| | treatment at a permitted facility or as advised by your |
| | product, if unaltered by use, may be disposed of |
| | appropriate Federal, State and local regulations. This |
| Waste from residues/unused products: | Waste disposal must be in accordance with |

| 14. TRANSPORT INFORMATION | | | | | |
|---------------------------|----------------------|---------------------------------|--|--|--|
| UN/Id No: | | Not regulated | | | |
| DOT Proper ship | pping name: | Not Regulated | | | |
| TGD(Canada) WHMIS haz | ard class: | Non - controlled | | | |
| IMDG/IMO IMDG – Haz | ard Classifications | Not Applicable | | | |
| Components | U.S. DOT –Appendix A | Table 1 – Reportable Quantities | | | |

| Components | U.S. DOT –Appendix A Table 1 – Reportable Quantities | |
|------------|--|--|
| Flutamide | Not Listed | |

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| Components | U.S. DOT – Appendix B – Marine Pollutants | U.S. DOT –Appendix B – Severe Marine | | |
|------------|---|--------------------------------------|--|--|
| | | Pollutants | | |
| Flutamide | Not Listed | Not Listed | | |

IMO – labels:

15. REGULATORY INFOTMATION

International Inventories

| Components | Inventory – United States TSCA – Sect.8(b) | Canada DSL Inventory List - | |
|------------|--|-----------------------------|--|
| Flutamide | Not Listed | Not Listed | |

U.S. regulations:

| Components | California proposition 65 - | Massachusetts Right to Know List: | New Jersey Right to Know List: | Pennsylvania Right to Know List: |
|------------|--------------------------------|--------------------------------------|-----------------------------------|--|
| Flutamide | NA | Not Listed | Not listed | Not listed |

| Components | Florida substance | | Rhode Island Right | Illinois – Toxic Air | Connecticut - |
|------------|-------------------|--|--------------------|----------------------|---------------|
| | List: | | to Know List: | Contaminants | Hazardous Air |
| Flutamide | Not Listed | | Not Listed | Not listed | Not listed |

| Components | SSARA | 313 | CERCLA/SARA | - | NTP: | IARC: |
|------------|-----------------|-----|---------------|-----|------------|------------|
| | Emission | | Section | 302 | | |
| | reporting/Toxic | | Extremely Haz | | | |
| | Release | of | | | | |
| | Chemicals | | | | | |
| Flutamide | | | Not Listed | | Not listed | Not listed |

16. OTHER INFORMATION

Prepared by: Health & Safety

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End of safety data sheet