Material Safety Data Sheet
Cyfluthrin 92%TC

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical product name: Cyfluthrin 92%TC
Company information: Choice Chemicals Ltd.
Centre of City, No.249 Wuyi Road, Furong District,
Changsha, Hunan 410011, P.R.China
Tel: 0086 731 89856736
Fax: 0086 73189878447
E-mail: info@choice-chem.com
24 hr Emergency number: 0086 13298652316

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME /CAS NUMBER  EXPOSURE LIMITS  CONCENTRATION (%)

***** HAZARDOUS INGREDIENTS *****

FCR 4545 Technical (beta-cyfluthrin)
68359-37-5 OSHA: Not Established 11.8 %
ACGIH: Not Established
Specific chemical identity is withheld as a trade secret.
OSHA: Not Established 1-3 %
ACGIH: Not Established

SECTION 3 - HAZARDS IDENTIFICATION

*****************************************************************
*       EMERGENCY OVERVIEW
*       *
* CAUTION! Color: Beige; Form: Liquid; Off-white to beige *
* viscous liquid suspension; Odor: Chalky; Harmful if *
* inhaled; Harmful if absorbed through skin; Causes eye *
* irritation.  *
*****************************************************************
POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY: Inhalation; Skin Contact; Skin Absorption; Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE: Skin and mucous membrane irritation may occur from contact with the product and produce symptoms such as itching, stinging, skin reddening or rash. Paresthesia (a tingling or burning sensation on the surface of the skin) may also result from skin contact.

These are frequently reported symptoms associated with sufficient dermal exposure to alpha-cyano (Type II) synthetic pyrethroids and normally subside without treatment within 24 hours. The onset of these symptoms usually occurs 2-12 hours after exposure. The effects are temporary and are reversible. Based on the EPA Toxicity Category criteria, this material is mildly toxic by the oral and dermal routes of exposure. In addition, animal studies have shown that it can cause mild irritation to the conjunctiva of the eye with all irritation resolving within 7 days.

CHRONIC EFFECTS OF EXPOSURE: Based on animal studies, no adverse effects or symptoms would be expected from chronic exposure to this material.

CARCINOGENICITY: This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure.

SECTION 4 - HAZARDS IDENTIFICATION

FIRST AID FOR EYES: Hold eyelids open and flush with copious amounts of water for 15 minutes. Call a physician if irritation develops or persists after flushing.

FIRST AID FOR SKIN: Remove contaminated clothing immediately. Wash skin with soap and water, preferably preceded by a waterless hand cleaner. Get medical attention if irritation develops or persists. If signs of intoxication (poisoning) occur, get medical attention immediately.

FIRST AID FOR INHALATION: If a person is overcome by excessive exposures to aerosols or
vapors of this material, remove to fresh air or uncontaminated area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention as soon as possible.
FIRST AID FOR INGESTION.: If ingestion is suspected, call a physician or poison control center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. If syrup of ipecac is available, administer 1 tablespoonful (15 mL) of syrup of ipecac followed by 1 to 2 glasses of water. If vomiting does not occur within 20 minutes, repeat the dose once.
Do not induce vomiting or give anything by mouth to an unconscious person.
NOTE TO PHYSICIAN.......: ANTIDOTE: No specific antidote is available. Treat victim symptomatically. Published data indicate vitamin E acetate can prevent and/or mitigate symptoms of paresthesia caused by synthetic pyrethroids. In case of poisoning, call the number on page 1.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: A flash point determination is unnecessary due to the high water content.
Suitable extinguishing media: foam, dry extinguishing media, carbon dioxide, water spray
Hazards during fire-fighting: carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, hydrogen fluoride, halogenated hydrocarbons, hydrocarbons. If product is heated above decomposition temperature, toxic vapors will be released. The substances/groups of substances mentioned can be released in case of fire.
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
Further information:
Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions:
Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions.
Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.
Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water. A spill of or in excess of the reportable quantity requires notification to state, local and national emergency authorities.
Cleanup:
Dike spillage. Pick up with suitable absorbent material. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled...
substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

SECTION 7 - HANDLING AND STORAGE

Handling
General advice:
RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Provide means for controlling leaks and spills. Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapors. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:
The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, and open flame. Avoid extreme heat. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage General advice:
Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage incompatibility:
General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Storage stability:
May be kept indefinitely if stored properly. If an expiry date is mentioned on the packaging/label this takes priority over the statements on storage duration in this safety data sheet.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL, PROTECTION

Users of a pesticidal product should refer to the product label for personal protective equipment requirements. Safety Data Sheet CY-KICK CS Advice on system design:
Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.
Personal protective equipment
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:
Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic Vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves. Protective glove selection must be based on the user’s assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS
Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment.
Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid
Odour: characteristic
Colour: beige to yellow
pH value: 7.5 - 8.5
Freezing point: approx. 0 °C Information applies to the solvent.
Boiling point: approx. 100 °C Information applies to the solvent.
Density: 0.96 g/cm³ (approx. 20 °C)
Solubility in water: dispersible
SECTION 10 - STABILITY AND REACTIVITY

Conditions to avoid:


Substances to avoid:
No substances known that should be avoided.

Hazardous reactions:
The product is chemically stable.

 Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.,
Prolonged thermal loading can result in products of degradation being given off.

 Thermal decomposition:
Possible thermal decomposition products: carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, hydrogen fluoride Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. To avoid thermal decomposition, do not overheat.

 Corrosion to metals:
Corrosive effects to metal are not anticipated.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity
Oral: Information on: cyfluthrin
Type of value: LD50
Species: rat
Value: 77 mg/kg
Inhalation:
Not inhalable due to the physico-chemical properties of the product.

 Dermal:
Information on: cyfluthrin
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Irritation / corrosion
Information on: cyfluthrin
Assessment of irritating effects:
Not irritating to eyes and skin.

Sensitization
Information on: cyfluthrin
Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Genetic toxicity
Information on: cyfluthrin
No mutagenic effects reported.

Carcinogenicity
Information on: cyfluthrin
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity
Information on: cyfluthrin
No reproductive toxic effects reported.

Development:
Information on: cyfluthrin
No teratogenic effects reported.

SECTION 12 - ECOLOGICAL INFORMATION

Fish
Information on: cyfluthrin
Acute:
Oncorhynchus mykiss/LC50 (96 h): 0.000068 mg/l

Aquatic invertebrates

Information on: cyfluthrin
Acute:
Daphnia magna/EC50 (48 h): 0.00029 mg/l
Aquatic plants

Information on: cyfluthrin
Toxicity to aquatic plants: green algae/EC50 (96 h): > 10 mg/l

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Pesticide wastes are regulated. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container disposal:
Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations.
Consult state or local disposal authorities for approved alternative procedures such as container recycling.
Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

SECTION 14 - TRANSPORT INFORMATION

Reference Bill of Lading
Safety Data Sheet
CY-KICK CS

SECTION 15 - REGULATORY INFORMATION

Federal Regulations
Registration status:
Chemical TSCA, US blocked / not listed
Crop Protection TSCA, US released / exempt
EPCRA 311/312 (Hazard categories): Acute;
EPCRA 313:
CAS Number Chemical name
68359-37-5 beta-Cifluthrine
SECTION 16 - OTHER INFORMATION

Disclaimer: Choice Chemicals Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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