SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-T-39303
Product Name	Phenothrin
CAS No.	26002-80-2
Category	Pesticide Standards
Synonyms	3-phenoxybenzyl 2,2-dimethyl-3-(2-methylprop-1-en-1-yl)cyclopropane-1-carboxylate
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H400	Not available

H410	Not available

Precautionary Statement(s)

Code	Statement
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P317	Not available
P321	Specific treatment (see … on this label).
P330	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Not available
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Phenothrin
CAS Number : 26002-80-2
Molecular Formula : C23H26O3
Molecular Weight : 350.46
Parent Chemical : -
Synonyms : 3-phenoxybenzyl 2,2-dimethyl-3-(2-methylprop-1-en-1-yl)cyclopropane-1-carboxylate
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

- General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or are severe.
- Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Get medical attention if irritation develops or persists.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.
- Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
- Not available.

4.3 Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.
- No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide.
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
- Combustion may produce irritating and/or toxic fumes.
- Hazardous decomposition products: Not available.

5.3 Advice for firefighters
- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Use water spray to cool unopened containers.
- Avoid inhalation of combustion products.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Avoid breathing dust/vapors/mist.
- Avoid contact with skin and eyes.
- Use appropriate personal protective equipment (see Section 8).
- Ensure adequate ventilation.

6.2 Environmental precautions
- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment. Prevent entry into drains, surface waters, and soil.

6.3 Methods and material for containment and cleaning up
- Contain spill. Collect using inert absorbent material.
- Place in suitable, closed container for disposal.
- Clean contaminated area with detergent and water; avoid generating aerosols.

6.4 Reference to other sections

- See Section 8 for personal protective equipment.
- See Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid contact with skin, eyes, and clothing.
- Avoid breathing dust/vapors/mist.
- Use only with adequate ventilation.
- Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
- Store in tightly closed container.
- Store in a cool, dry, well-ventilated place.
- Protect from heat and sources of ignition.
- Incompatible materials: Not available.

7.3 Specific end use(s)
- Pesticide standard / laboratory use. Not for food, drug, or household use.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls
- Engineering controls: Provide adequate ventilation. Use local exhaust where dust/vapors/mist may be generated.
- Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Protective gloves (material not specified). Wear protective clothing to prevent skin contact.
- Respiratory protection: If ventilation is inadequate, use appropriate respiratory protection (type not specified).
- Hygiene measures: Remove contaminated clothing and wash before reuse. Do not eat, drink, or smoke when using this product.
- Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available

Test	Result
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
- No data available.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- No data available.

10.4 Conditions to avoid
- Heat, flames, sparks, and other ignition sources.
- Excessive heat.

10.5 Incompatible materials
- Not available.

10.6 Hazardous decomposition products
- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: LD50: > 5000 mg/kg (Oral, Rat) (A561) LD50: 10 000 mg/kg (Dermal, Rat) (A561) /SIGNS AND SYMPTOMS/ The clinical manifestations of inhalation exposure to pyrethrins can be local or systemic. Localized reactors confined to the upper respiratory tract include rhinitis, sneezing, scratchy throat, oral mucosal edema, and even laryngeal mucosal edema. Localized reaction of the lower respiratory tract include cough, shortness of breath, wheezing, and chest pain. An asthmalike reaction occurs with acute exposures in sensitized patients. Hypersensitivity pneumonitis characterized by chest pain, cough, dyspnea, & bronchospasm may occur in an individual chronically exposed. /Pyrethrum and synthetic pyrethroids/
- Skin corrosion/irritation: /HUMAN EXPOSURE STUDIES/ d-Phenothrin (talc powder formulation with Span 80 as a stabilizer) was applied to the head hair and pudendal hair of eight male human volunteers (three times at intervals of 3 days) at a dose of 32 mg/man per administration (0.44 to 0.67 mg/kg body weight per day). d-Phenothrin powder was washed off 1 hr after application. There were no significant abnormalities due to d-phenothrin in terms of dermal irritation, clinical signs, or blood biochemical and hematological parameters. The blood levels of d-phenothrin were below the detection limit ...
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data available.
- Reproductive toxicity: No data available.
- STOT-single exposure: No data available.
- STOT-repeated exposure: /SIGNS AND SYMPTOMS/ The clinical manifestations of inhalation exposure to pyrethrins can be local or systemic. Localized reactors confined to the upper respiratory tract include rhinitis, sneezing, scratchy throat, oral mucosal edema, and even laryngeal mucosal edema. Localized reaction of the lower respiratory tract include cough, shortness of breath, wheezing, and chest pain. An asthmalike reaction occurs with acute exposures in sensitized patients. Hypersensitivity pneumonitis characterized by chest pain, cough, dyspnea, & bronchospasm may occur in an individual chronically exposed. /Pyrethrum and synthetic pyrethroids/ /LABORATORY ANIMALS: Subchronic or Prechronic Exposure/ At dietary level of 1000 ppm pyrethrins & 10000 ppm piperonyl butoxide ... /enlargement, margination, & cytoplasmic inclusions in liver cells of rats/ were well developed in only 8 days, but ... were not maximal. Changes were proportional to dosage & similar to those produced by DDT. Effects of the 2 ... were additive. /Pyrethrins/
- Aspiration hazard: No data available.

Likely routes of exposure

- Following oral exposure, severe fine tremor, marked reflex hyperexcitability, sympathetic activation can occur. Nausea, vomiting and abdominal pain commonly occur and develop following ingestion. Sudden bronchospasm, swelling of oral and laryngeal mucous membranes, and anaphylactoid reactions have been reported after inhalation. Hypersensitivity reactions characterized by pneumonitis, cough, dyspnea, wheezing, chest pain, and bronchospasm may occur too . Dermatitis is the main effect of a dermal exposure to phenothrin. (T36)

Symptoms related to the physical, chemical and toxicological characteristics
- Both type I and type II pyrethroids exert their effect by prolonging the open phase of the sodium channel gates when a nerve cell is excited. They appear to bind to the membrane lipid phase in the immediate vicinity of the sodium channel, thus modifying the channel kinetics. This blocks the closing of the sodium gates in the nerves, and thus prolongs the return of the membrane potential to its resting state. The repetitive (sensory, motor) neuronal discharge and a prolonged negative afterpotential produces effects quite similar to those produced by DDT, leading to hyperactivity of the nervous system which can result in paralysis and/or death. Other mechanisms of action of pyrethroids include antagonism of gamma-aminobutyric acid (GABA)-mediated inhibition, modulation of nicotinic cholinergic transmission, enhancement of noradrenaline release, and actions on calcium ions. They also inhibit calium channels and Ca2+, Mg2+-ATPase. (T10, T18, L857)

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
- No data available.

12.2 Persistence and degradability
- No data available.

12.3 Bioaccumulative potential
- No data available.

12.4 Mobility in soil
- No data available.

12.5 Results of PBT and vPvB assessment
- Not available.

12.6 Endocrine disrupting properties
- Not available.

12.7 Other adverse effects
- Not available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains or the environment.
- Incineration or disposal via a licensed waste contractor may be appropriate.
- Contaminated packaging: Dispose of as unused product unless cleaned according to applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Not available.

15.2 Chemical safety assessment
- Not available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: Phenothrin
- CAS No.: 26002-80-2
- Catalog No.: CS-T-39303
- Recommended use: Pesticide standard / laboratory use.
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

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