



ZHEJIANG RAYFULL CHEMICALS CO.,LTD.

Room 601 3A. Daziran City Lighter Bldg.Wenzhou Zhejiang China.

Tel: +86-577-88905587,88908857

Fax:+86-577-88905567

Website: <http://www.rayfull.com>

MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD.

ADD: ROOM 601, 3A DAZIRAN CITY LIGHT BLDG WENZHOU ZHEJIANG CHINA.

Tel: +86-577-88905587

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1. Chemical Product Identification

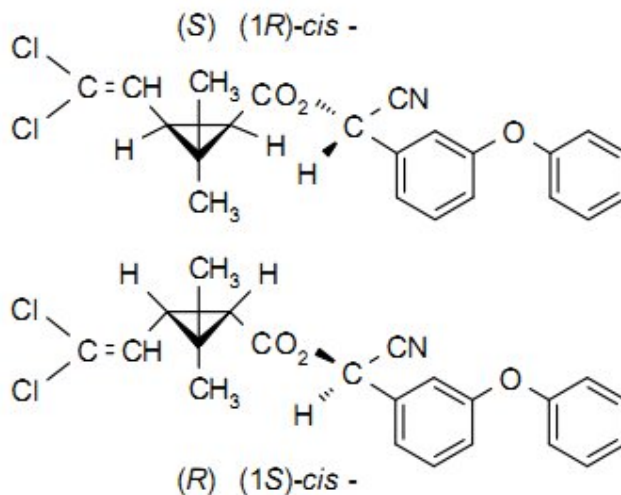
Product Name: Navigator 100 EC

Molecular Formula: $C_{22}H_{19}Cl_2NO_3$

Chemical Name:

racemate comprising (R)- α -cyano-3-phenoxybenzyl (1S)-cis-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (S)- α -cyano-3-phenoxybenzyl (1R)-cis-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC)

Structural formula:



Molecular Weight: 416.30

CAS No.: 67375-30-8

2. Composition / Information on Ingredients

Composition	CAS No.	Content
Alpha-cypermethrin	67375-30-8	$\geq 10\%$
Other ingredients		$\leq 90\%$



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3. Hazards Identification

Most important hazards - Harmful if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First Aid Measures

Skin contact: May cause skin irritation in susceptible persons. Remove contaminated clothing Wash off immediately with soap and plenty of water. If irritation persists obtain medical attention. Contaminated clothing should be washed and dried before re-use

Eye contact: May cause eye irritation of susceptible persons. Rinse immediately with plenty of water for at least 15 minutes. If irritation persists obtain medical attention.

Inhalation: Inhalation of mist or spray may cause irritation of the respiratory system. Move to fresh air. Obtain medical advice immediately.

Ingestion: Harmful if swallowed. Do not induce vomiting. If conscious give a small amount of milk or water to drink and obtain medical attention. Show the container label or this safety data sheet to the doctor

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-Fighting Measures

Extinguishing media: The product itself does not burn. Keep fire exposed containers cool by spraying with water if exposed to fire. Fight surrounding fire with dry chemical, foam or water spray.

Extinguishing mediawhich must not be used for safety reasons: Do not use water jets

Specific hazards: This product is not flammable. May decompose if involved in a fire, producing toxic and irritant fumes.

Special protective equipment for firefighters: In the event of fire, wear a self-contained breathing apparatus and a chemical protection suit, gloves and boots.

6. Accidental Release Measures

Personal precautions: Wear suitable protective clothing, gloves and eye/face protection.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Contain or absorb leaking liquid with earth or sand. Do not let product enter drains. If substance has entered a watercourse or sewer or contaminated soil or vegetation, inform the appropriate authority.

Methods for cleaning up: Soak up with inert absorbent material. Transfer to a suitably labelled container. Subsequently, wash the contaminated area with water, or detergent and water, taking care to prevent the washings from entering surface water drains.

7. Handling And Storage:

Handling: If splashing is likely to occur wear approved eye protection. If spray mists are likely, wear a suitable approved respirator. If skin contact is likely to occur wear rubber gloves and suitable impervious protective clothing. Use in a well ventilated area where possible. Always use good personal hygiene procedures when handling chemicals. Do not smoke eat or drink while handling this product. Wash hands, face and exposed skin after using, and before eating, drinking



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or smoking. Read the label before use.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food and animal feedstuffs.

8. Exposure Controls / Personal Protection

Engineering control: Use local exhaust ventilation at all processes locations where vapour or mist may be emitted. Ventilate all transport vehicles prior to unloading.

Personal Protective Equipment:

Eye and face protection - Safety goggles or face shield. Storing facility should be equipped with eye wash facility and safety shower.

Clothing – Long sleeved shirt and long pants, shoes plus socks, chemical resistant headgear for overhead exposures.

Gloves – Wear waterproof gloves.

User Safety Recommendations

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change in to clean clothing.

9. Physical And Chemical Properties

Physical State: white liquid.

Odor: Odorless

pH: 5 to 8

Persistent foam : Maximum 60ml after 1 min

Water Solubility: Miscible

Wet sieve test: Maximum: 2% of the formulation shall be retained on a 75 µm test sieve.

10. Stability And Reactivity

Stability: Stable under normal conditions

Incompatible with other material: Strong oxidizers

Conditions to Avoid: Heat, flames and sparks.

Hazardous decomposition products: Combustion or thermal decomposition will produce toxic and irritant fumes

11. Toxicological Information

Acute Oral LD50 (rat): 2000 mg/kg

LD50 Dermal (rat): > 4000 mg/Kg

Sensitisation: May cause sensitisation of susceptible persons by skin contact or by inhalation of aerosol or dust.

Repeated or prolonged exposure: Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons.

12. Ecological And Ecotoxicological Information



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Ecotoxicity effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further Information: This product must not enter water discharge system. Inform appropriate authority if large spillage enters drains.

13. Disposal Considerations

Waste – Dispose of in accordance with applicable Federal, State, local laws and regulations.

Container –Do not re-use the container. Dispose of empty containers in a sanitary landfill or incineration so as to avoid environmental or water pollution.

14. Transport Information

Not Applicable

15. Regulatory Information

Not Applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipients subsequently produce formulations containing this product, it is the recipients' sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.