



## MATERIAL SAFETY DATA SHEET

### Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD

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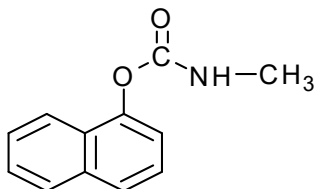
### 1. Chemical Product Identification

Product Name: Carbaryl 85% WP

Molecular Formula: C<sub>12</sub>H<sub>11</sub>NO<sub>2</sub>

Molecular Weight: 201.23 g/mol

Structural Formula:



Chemical Name: 1-naphthyl methylcarbamate

Form: Powder

Colour: White

### 2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Carbaryl	63-25-2	85.0
Other ingredients		15.0

### 3. Hazards Identification

Emergency overview: Warning! May be fatal if swallowed.



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#### **4. First Aid Measures**

**Skin:** Remove contaminated clothing and wash affected areas thoroughly with soap and water.

**Eyes:** Flush with large quantities of clean tap water for at least 15 minutes.

**Inhalation:** Move affect person to fresh air and keep at rest until recovered. If not breathing, give artificial respiration and get to a doctor.

**Ingestion:** Do not induce vomiting if the person is conscious, give glass of water. get to a doctor.

#### **5. Fire-Fighting Measures**

Suitable extinguishing media: small fires, carbon dioxide, dry chemical

Large fires: alcohol foam, polymer foam, and water spray

Fire fighting instructions: Firefighters should wear niosh/msha approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire, Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later, Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

#### **6. Accidental Release Measures**

**Cleanup and Disposal of spill:** Shoved up into an appropriate closed container. Clean up residual material by washing area with water. Decontaminate tools and equipment following cleanup. Avoid creation of dusty conditions.

**Land Spill or Leaks: Containment of spill:** Follow procedure under Cleanup and Disposal of spill.

**Environment and Regulatory Reporting:** If spilled on the ground, the affected area should be scraped clean and placed in an appropriate container for disposal. Runoff from fire control or dilution water may cause pollution. Prevent material from entering public sewer system or any waterway.

#### **7. Handling And Storage**

**Handing:** Avoid direct or prolonged contact with skin and eyes. Avoid breathing dusts. Do



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not ingest.

Storing: Store in original. Keep in a dry, cool place. Store in an area that is away from foodstuffs or animal feed, out of reach of children and animals.

## 8. Exposure Controls/Personal Protection

Engineering Controls: Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

Eye/Face Protection: Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate equipment should be selected for the particular use intended for this material. Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles, An emergency eye wash must be readily accessible to the work area.

Body Protection: Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regards of use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

## 9. Physical and Chemical Properties

Appearance: White powder

Water:  $\leq 2.0\%$

Suspensibility:  $\geq 80\%$

pH: 6.0-8.0

Fineness:  $\geq 98\%$

Wetting time:  $\leq 120s$

## 10. Stability and Reactivity

Chemical Stability: This material is stable under normal handing and storage conditions.

Conditions to avoid: Extreme heat, open flame

Incompatibility: strong acids

Hazardous Products of Decomposition: Decomposition Type: thermal, oxides of nitrogen, carbon oxides. Methyl isocyanate (trace, no adverse effects expected)

Hazardous Polymerization (Conditions to avoid): not applicable



## 11. Toxicological Information

Acute oral LD<sub>50</sub> for rat: 614 a.i.mg/kg.

Acute dermal LD<sub>50</sub> for rat: >5000 a.i.mg/kg.

Inhalation LC<sub>50</sub> (4 h) for rat: 2.4 a.i. mg/L.

Skin irritation: slight-irritating to skin (rabbits).

Eye irritation: slight-irritating to eyes (rabbits).

Skin sensitization: Not a skin sensitiser (guinea pigs).

## 12. Ecological And Ecotoxicological Information

Effect on birds: low toxicity to birds, acute LD<sub>50</sub> for Mallard ducks is >2000 a.i.mg/kg.

Effect on fish: moderate toxicity to fish, acute 96 hour LC<sub>50</sub> for Fathead minnow is 2.6 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC<sub>50</sub> for Daphnia magna is 0.0064 a.i.mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC<sub>50</sub> for Chlorella spp. is 0.6 a.i.mg/L.

Effect on honeybees: high toxicity to honeybees, contact acute 48 hour LD<sub>50</sub> is 0.14 a.i.µg/bee; Oral acute 48 hour LD<sub>50</sub> is 0.21 a.i.µg/bee.

Effect on earthworms: high toxicity to earthworms, acute 14 day LC<sub>50</sub> is <4 a.i.mg/kg.

## 13. Disposal Considerations

Residues in container should be emptied in a diluted form into a deep pit taking care to avoid contamination of ground waters. The empty container may be decontaminated by rinsing two or three times with water and detergent and scrubbing the sides. The hands should be protected during this work. Decontaminated containers should not be used for food or drinking water.

## 14. Transport Information

Not applicable

## 15. Reactivity data

Not applicable



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### **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 recipient 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.