

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cymoxanil+Mancozeb 8%+64% WP

Trade Name: PHOEBE

	CAS NO.	Molecular weight	Chemical formula
Cymoxanil	57966-95-7	198.18	C ₇ H ₁₀ N ₄ O ₃
Mancozeb	8018-01-7	271.2	(C ₄ H ₆ MnN ₂ S ₄) X (Zn) _Y

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2. HAZARD IDENTIFICATION

2.1 Hazard identification

Toxicity class

WHO (Cymoxanil a.i & Mancozeb a.i.): III

A low toxicity fungicide.

Likely routes of exposure

Skin and eye contact. Slightly hazardous by ingestion.

Environmental Hazard

Product is very toxic to fish and aquatic organisms.

Eye contact

Mild irritant. Product may pose a slight risk of serious damage to eyes, due to inert.

Skin contact

Minimally toxic and prolonged skin contact can cause possible skin irritation. Mild irritant. **Ingestion**
Minimally toxic.

Inhalation

Inhalation of the dust may be irritating to the nose, throat and lungs.

Delayed effects

At high levels Mancozeb has caused hindleg paralysis in test animals and an increased incidence of retinal degeneration. It has caused thyroid tumours and birth defects in test animals, resulting from ethylenethiourea (ETU) formation. ETU, a trace contaminant and breakdown product of Mancozeb, primarily affects the thyroid and liver. It has also caused other endocrine and blood effects, tumours and birth defects in test animals.

3. COMPOSITION INFORMATION

Ingredient		CAS No.	Content
Active ingredient	Cymoxanil	57966-95-7	8%
Active ingredient	Mancozeb	8018-01-7	64%

Inert	Not listed	Up to 100%
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4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Never give anything by mouth to an unconscious person.

If inhaled

If breathed in, move person into fresh air. Oxygen or artificial respiration if needed. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use. Consult a physician.

In case of eye contact

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention. Consult a physician.

If swallowed

Obtain medical attention. Do not induce vomiting without medical advice. If victim is conscious: Rinse mouth with water. Drink 1 or 2 glasses of water.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, foam, dry chemical or carbon dioxide.

5.2 Extinguishing media which shall not be used for safety reasons

High volume water jet, (contamination risk).

5.3 Specific hazards during fire fighting

Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO₂) nitrogen oxides (NO_x).

5.4 Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

5.5 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulation.

(on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Evacuate personnel to safe area. Control access to area. Avoid dust formation. Avoid breathing dust. Avoid contact with skin and eyes. Use personal protective equipment. Refer to protective measures listed in

sections 7 and 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillage cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods for cleaning up

Clean-up methods-small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.

Clean-up methods-large spillage Prevent further leakage or spillage. Avoid dust formation. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations.

6.4 Additional advice

Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

7.1 Handling

Advice on safe handling: Use only according to our recommendations. Use only clean equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust or spray mist. Wear personal protective equipment. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use/ avoid exceeding of the given occupational exposure limits.

Advice on protection against fire and explosion: Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

7.2 Storage

Requirements for storage areas and containers: Store in original container. Keep in properly labelled containers. Keep container tightly closed in a dry and well-ventilated place. Store in a place accessible by authorized persons only. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Advice on common storage: No special restrictions on storage with other products. Do not store near acids.

Storage temperature: <49 ° C

Other data: Stable under recommended storage conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery. Contains no substances with occupational exposure limit values.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Eye/face Contact

Safety glasses with side-shields conforming to EN166

Skin Contact

Manufacturing and processing work: Full protective clothing Type 5 (EN 13982-2)

Mixer and loaders must wear: Full protective clothing Type 5+6 (EN ISO 13982-2/EN 13034) Rubber apron
Rubber or plastic boots.

Spray application-outdoor: Full protective clothing Type 4 (EN 14605) Rubber or plastic boots.

Spray application-indoor: Full protective clothing Type 4 (EN14605) Rubber or plastic boots.

Respiratory protection

Manufacturing and processing work: Half mask with a particle filter FFP1 (EN149)

Mixer and loaders must wear: Half mask with a particle filter FFP1 (EN149)

Spray application-outdoor: Half mask with a particle filter FFP1 (EN149)

Spray application-indoor: Half mask with a particle filter FFP2 (EN149)

Hand protection

Material: Nitrile rubber

Glove thickness: 0,4 - 0,7 mm

Glove length: Gauntlets

Protection index: Class 6

Wearing time: > 480 min

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., The suitability for a specific workplace should be discussed with the producers of the protective gloves., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough., Before removing gloves clean them with soap and water.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations.

Protective measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or

if contaminated. Only protected handlers may be in the area during application.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow powder
Odour	Characteristic
Odour threshold	No data available
pH	6.0-8.0
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid,gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water Solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

Temperature > 49 °C

To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air.

10.2 Materials to avoid

No materials to be especially mentioned., Incompatible with acids.

10.3 Hazardous decomposition products

Sulphur oxides

10.4 Hazardous reactions

No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral

Low Toxic

Oral (LD50 Rat) : > 4640 mg/kg body weight

Dermal

Low Toxic

Dermal (LD50 Rat) : > 2,150 mg/kg body weight

Inhalation

Practically Non-Toxic

Inhalation (LC50 Rat) : >5000 mg/m³

Eye Contact

No Irritating (Rabbit)

Skin Contact

No Irritating (Rabbit)

Skin Sensitization

Weak skin sensitizing (Guinea Pig).

12. ECOLOGICAL INFORMATION

12.1 Elimination information (persistence and degradability)

Biodegradability

Not readily biodegradable. Estimation based on data obtained on active ingredient.

Bioaccumulation

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB). This mixture contains substances considered to be very persistent and very bioaccumulating (vPvB).

Toxicity to fish

Mancozeb:

LC50 / 96 h/ *Lepomis macrochirus* (Bluegill sunfish): 1,63 mg/l

LC50/ 96 h/ *Oncorhynchus mykiss* (rainbow trout): 0,073 mg/l

Cymoxanil:

LC50 / 96 h/ *Oncorhynchus mykiss* (rainbow trout): 61 mg/l

LC50/ 96 h/ *Lepomis macrochirus* (Bluegill sunfish): 29 mg/l

Toxicity to algae

Mancozeb:

/ ErC50/ 48 h/ *Pseudokirchneriella subcapitata* (green algae): 0,43 mg/l

Cymoxanil:

/ EbC50/ 72 h/ *Pseudokirchneriella subcapitata* (green algae): < 0,662 mg/l

Aquatic toxicity

Mancozeb:

/ EC50/ 48 h/ *Daphnia magna* (Water flea): 0,073 mg/l

Cymoxanil:

/ EC50/ 48 h/ *Daphnia magna* (Water flea): 27 mg/l

Chronic toxicity to fish

Mancozeb:

/ NOEC/ 34 d/ *Cyprinodon* sp. (minnow): 0,00219 mg/l

Cymoxanil:

/ NOEC/ 21 d/ Oncorhynchus mykiss (rainbow trout): 0,22 mg/l

/ NOEC/ 97 d/ Oncorhynchus mykiss (rainbow trout): 0,00098 mg/l

Chronic toxicity to aquatic Invertebrates

Mancozeb:

/ NOEC/ 21 d/ Daphnia magna (Water flea): 0,0073 mg/l

Cymoxanil:

/ NOEC/ 21 d/ Daphnia magna (Water flea): 0,067 mg/l

13. DISPOSAL CONSIDERATION

13.1 Product

In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.

13.2 Contaminated packaging

Do not re-use empty containers.

14. TRANSPORT INFORMATION

14.1 ADR

Class: 9

Packaging group: III

Classification Code: M7

HI No.: 90

UN number: 3077

Labelling No.: 9

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Mancozeb, Cymoxanil)

14.2 IMDG

Class: 9

Packaging group: III

UN number: 3077

Labelling No.: 9

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Mancozeb, Cymoxanil)

14.3 Further information

Not classified as dangerous in the meaning of air transport regulations., Optional classification as per IATA Special Provision A97.

15. REGULATORY INFORMATION

15.1 Hazard identification

Toxicity class

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A low toxicity fungicide.

Likely routes of exposure

Skin and eye contact. Slightly hazardous by ingestion.

Environmental Hazard

Product is very toxic to fish and aquatic organisms.

Eye contact

Mild irritant. Product may pose a slight risk of serious damage to eyes, due to inert.

Skin contact

Minimally toxic and prolonged skin contact can cause possible skin irritation. Mild irritant. **Ingestion**

Minimally toxic.

Inhalation

Inhalation of the dust may be irritating to the nose, throat and lungs.

Delayed effects

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16. OTHER INFORMATION

Disclaimer:

The manufacture 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. The manufacture makes no representations or express or implied, including without limitation any warranties of merchantability fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, the manufacture will not be responsible for damages resulting from use of or reliance upon this information.
