

SAFETY DATA SHEET



Curzate® M

Version 2.4
Document no. 130000028882

Revision Date 25.06.2019
Issue Date 25.06.2019

This SDS adheres to the standards and regulatory requirements of Malaysia and may not meet the regulatory requirements in other countries.

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Curzate® M

Other names : B10054301

Recommended use of the chemical and restriction on use

Recommended use : Fungicide

Restrictions on use : Do not use product for anything outside of the above specified uses.

Manufacturer, importer, supplier, representative office

Company : Du Pont Production Agriscience (Malaysia) Sdn Bhd
Street address : B-3-3, The Ascent Paradigm, SS 7 /26A, Kelana Jaya 47301, Selangor.
Malaysia
Telephone : +60 3 7800 0280
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Emergency telephone number : +60 3 7800 0287

2. HAZARDS IDENTIFICATION

Product hazard classification

Serious eye damage/eye irritation : Category 2

Reproductive toxicity : Category 2

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 1

Endpoints which are not classified, cannot be classified or are not applicable are not shown.

Label content

Pictogram :



Signal word : Warning

Hazardous warnings : Causes serious eye irritation.
Suspected of damaging the unborn child.
Very toxic to aquatic life with long lasting effects.

Precautionary : Obtain special instructions before use.

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statements

Do not handle until all safety precautions have been read and understood.
Wash skin thoroughly after handling.
Wear eye protection/ face protection.
Use personal protective equipment as required.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Collect spillage.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Components

Chemical name	CAS-No.	Concentration
Mancozeb	8018-01-7	64 %
Cymoxanil	57966-95-7	8 %
Other Ingredients		28 %

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Never give anything by mouth to an unconscious person.

- Inhalation** : Move to fresh air. Artificial respiration and/or oxygen may be necessary. Call a poison control center or doctor for treatment advice.
- Skin contact** : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact** : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- Ingestion** : Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Call a poison control center or doctor for treatment advice.
- Most important symptoms/effects, acute and delayed** : No information available.
- Protection of first-aiders** : No information available.
- Notes to physician** : No information available.

5. FIREFIGHTING MEASURES

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- Suitable extinguishing media** : Water spray, Dry chemical, Foam, Carbon dioxide (CO₂)
- Unsuitable extinguishing media** : High volume water jet, (contamination risk)
- Specific hazards** : Under severe dusting conditions, this material may form explosive mixtures in air.
- Special protective equipment for firefighters** : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- Specific extinguishing methods** : No information available.
- 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 regulations.
(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

- Personal precautions, protective equipment and emergency procedures** : Evacuate personnel to safe areas. Control access to area. Avoid dust formation. Avoid breathing dust. Avoid contact with skin and eyes. Use personal protective equipment.
- Environmental precautions** : Prevent material from entering sewers, waterways, or low areas.
- Methods and materials for containment and 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 (see section 13).
- Additional advice** : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Handling

- Technical measures/Precautions** : Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Avoid dust formation.
- Precautions for safe handling** : Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

Storage

- Suitable storage** : Store in original container. Keep in properly labelled containers. Keep containers

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conditions

tightly closed in a dry, cool 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.

Storage period: Storage temperature: < 49 °C
Stable under recommended storage conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No occupational exposure limit values are applicable.

Engineering measures : Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery. Use sufficient ventilation to keep employee exposure below recommended limits.

Biological occupational exposure limits : No information available.

Personal protective equipment

Respiratory protection : Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge.

Hand protection : Material: Protective gloves

Eye protection : Wear protective eyewear to prevent contact with this substance.

Skin protection : Wear protective clothing such as gloves, apron, boots, or coveralls, as appropriate.

Hygiene measures : Avoid contact with skin, eyes and clothing. Avoid breathing dust. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. Wash thoroughly and put on clean clothing.

Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
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.
End users of this product should follow label instructions for personal protection when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (Physical state, form, colour, etc.)

Physical state : solid
Form : powder
Colour : light yellow

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Odour	:	sulphurous
Odour Threshold	:	No information available.
pH	:	6.7 (1% solution in water)
Melting point/freezing point	:	No information available.
Initial boiling point and boiling range	:	No information available.
Flash point	:	No information available.
Evaporation rate	:	No information available.
Flammability (solid, gas)	:	No information available.
Upper/lower flammability or explosive limits	:	Upper explosion limit : No information available. Lower explosion limit : No information available.
Vapour pressure	:	No information available.
Vapour density	:	No information available.
Density	:	Density : 0.64 g/cm ³ Bulk density : 290 kg/m ³ loose 410 kg/m ³ packed
Solubility(ies)	:	Water solubility : dispersible
Partition coefficient: n-octanol/water	:	No information available.
Auto-ignition temperature	:	No information available.
Decomposition temperature	:	No information available.
Viscosity	:	Viscosity, kinematic : No information available.
Molecular weight	:	No information available.
Oxidizing properties	:	The product is not oxidizing.

10. STABILITY AND REACTIVITY

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Reactivity	: No information available.
Chemical stability	: Stable at normal temperatures and storage conditions. May undergo decomposition upon prolonged exposure to heat. May undergo decomposition upon prolonged exposure to air.
Possibility of hazardous reactions	: Polymerization will not occur.
Conditions to avoid	: To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air.
Materials to avoid	: Incompatible with oxidizing agents. Incompatible with acids.
Hazardous decomposition products	: Hazardous decomposition products Sulphur compounds, Hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Oral

Curzate® M : LD50/Rat: 7,664 mg/kg

Inhalation

Curzate® M : LC50/Rat(dust/mist): > 5.4 mg/l

Dermal

Curzate® M : LD50/Rat: > 5,000 mg/kg

Skin corrosion/irritationCurzate® M : Species: Rabbit
Result: No skin irritation**Serious eye damage/eye irritation**Curzate® M : Species: Rabbit
Result: Eye irritation**Respiratory or skin sensitisation**Curzate® M : Species: Guinea pig
Result: Does not cause skin sensitisation.
Classification: Did not cause sensitisation on laboratory animals.**Germ cell mutagenicity**

Mancozeb : Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Cymoxanil : Animal testing did not show any mutagenic effects. Evidence suggests this substance does not cause genetic damage in cultured bacterial cells. Tests on mammalian cell cultures showed mutagenic effects.

Carcinogenicity

Curzate® M : Not classifiable as a human carcinogen.

Reproductive toxicity

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- Mancozeb : Reproductive toxicity: Some evidence of adverse effects on development, based on animal experiments.
Animal testing showed no reproductive toxicity.
No effects on or via lactation
Teratogenicity: Animal testing showed effects on embryo-foetal development including:
Reduced embryo-foetal viability
Foetal malformations
- Cymoxanil : Reproductive toxicity: No toxicity to reproduction
Teratogenicity: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Specific Target Organ Toxicity

Specific target organ toxicity - single exposure

- Mancozeb : The substance or mixture is not classified as specific target organ toxicant, single exposure.
- Cymoxanil : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

- Mancozeb : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
- Cymoxanil : Likely route of exposure: Ingestion
Target Organs: thymus
The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration hazard

- Mancozeb : No aspiration toxicity classification
- Cymoxanil : No aspiration toxicity classification

Other

- Mancozeb : Repeated dose toxicity:
Ingestion/Mouse 90 d
Method: OPPTS 870.3100
No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., Thyroid effects, Liver effects
Inhalation/Rat 90 d dust/mist
Method: OPPTS 870.3465
No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification.
Skin contact/Rat 28 d
Method: OPPTS 870.3200
No toxicologically significant effects were found.
- Cymoxanil : Repeated dose toxicity:
The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.
Oral/multiple species
altered blood chemistry, No effect to neurotoxicity.
Oral - feed/Dog 90 d

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Target Organs: thymus
Thymus effects

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Acute and prolonged toxicity to fish

Curzate® M : LC50/96 h/Oncorhynchus mykiss (rainbow trout): 0.46 mg/l

Toxicity to aquatic plants

Curzate® M : EbC50/72 h/Pseudokirchneriella subcapitata (green algae): 0.029 mg/l

Acute toxicity to aquatic invertebrates

Curzate® M : EC50/48 h/Daphnia magna (Water flea): 0.71 mg/l

Chronic toxicity to fish

Mancozeb : NOEC/35 d/Pimephales promelas (fathead minnow): 0.00219 mg/l

Cymoxanil : NOEC/21 d/Oncorhynchus mykiss (rainbow trout): 0.22 mg/l

Chronic toxicity to aquatic Invertebrates

Curzate® M : NOEC/21 d/Daphnia magna (Water flea): 0.01 mg/l

Persistence and degradability

Mancozeb : Result: Not biodegradable

Bioaccumulation

Mancozeb : Bioaccumulation is unlikely.

Mobility in soil

No information available.

Other adverse effects

Curzate® M : See product label for additional application instructions relating to environmental precautions.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods : In accordance with local and national regulations. The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging : Do not re-use empty containers.

14. TRANSPORT INFORMATION

IMDG

UN number : 3077
UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Mancozeb, Cymoxanil)

Transport hazard class : 9
Packing group : III
Marine pollutant : yes (Mancozeb, Cymoxanil)

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IATA

UN number : 3077
UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Mancozeb, Cymoxanil)
Transport hazard class : 9
Packing group : III

Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises : Not applicable

15. REGULATORY INFORMATION

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
Pesticides Act 1974 (Act 149) (Incorporating all amendments up to 1 January 2006).

16. OTHER INFORMATION

References

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(R) Registered trademark of E.I. du Pont de Nemours and Company
(TM) Trademark of E.I. du Pont de Nemours and Company.
Take notice of the directions of use on the label.

Significant change from previous version is denoted with a double bar.

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