

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

**1.1. Product identifier**

Product form : Mixture  
Product name. : VALBON  
Product code : KI 008 C1064  
Type of formulation : Water dispersible (WG)  
Active Ingredient : Mancozeb

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**2.1. Relevant identified uses**

Main use category : Plant protection product for professional use. Agriculture.  
Use of the substance/mixture : Fungicide.

**1.2.2. Uses advised against**

No additional information available.

**1.3. Details of the supplier of the safety data sheet**

Supplier:

Kumiai Chemical Industry Co., Ltd.  
Product Development & Technical Service Section  
Overseas Department  
1-4-26, Ikenohata, Taitoh-ku, Tokyo 110-8782,  
Japan  
[m-shibata@kichem-europe.com](mailto:m-shibata@kichem-europe.com)  
T+32 (0)2 761 04 30

Distributor:

CERTIS UK  
Suite 5, 3 Riverside  
Granta Park  
Great Abington  
Cambridgeshire CB21 6AD  
United Kingdom  
Tel: +44 (0)845 373 0305  
Fax: +44 (0)1223 891210  
Email: [certis@certiseurope.co.uk](mailto:certis@certiseurope.co.uk)  
Website: [www.certiseurope.co.uk](http://www.certiseurope.co.uk)

**1.4. Emergency telephone number**

Emergency number : Certis Carechem24 multilingual 24 hours emergency number: +44 (0) 870 190 6777.  
For advice on medical emergencies, fires, spillages or chemical hazards only –phone: 0870 190 6777.  
For further advice for medical professionals - The National Poisons Information Service:  
Tel: 0870 600 6266 (UK only) or Dublin Tel: 0035 3 137 99 64/379966.  
For further advice for veterinary surgeons: 020 7635 9195.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Sens. 1 H317

Carc. 2 H351

Repr. 2 H361

Aquatic Acute 1 H400

Full text of H-phrases: see section 16

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.  
H351 - Suspected of causing cancer.  
H361 - Suspected of damaging fertility or the unborn child.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.  
P103 - Read label before use.  
P260 - Do not breathe spray.  
P263 - Avoid contact during pregnancy/while nursing.  
P273 - Avoid release to the environment.  
P281 - Use personal protective equipment as required.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

EUH phrases

: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable.

### 3.2. Mixture

| Name                      | Product identifier                                   | %     | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------|--|-------|---|
| Mancozeb                  | (CAS No) 8018-01-7<br>(EC index no) 0060-076-00-1    | >= 50 | Skin Sens. 1, H317<br>Repr. 2, H361<br>Aquatic Acute 1, H400    |
| Benthiavalicarb-isopropyl | (CAS No) 177406-68-7<br>(EC no) -<br>(EC index no) - | < 5   | Skin Sens. 1, H317<br>Carc. 2, H351                             |

Full text of H- and EUH-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : In the event of any complaints or symptoms, avoid further exposure.
- First-aid measures after inhalation : IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing  
If symptoms persist call a doctor.
- First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water  
Remove contaminated clothing and shoes  
If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Consult an eye specialist.
- First-aid measures after ingestion : IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Never give anything by mouth to an unconscious person.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms after ingestion : After gavage to rats, no clinical signs of toxicity were observed throughout the 14-day observation period.
- Symptoms after skin contact : After intradermal injection in the guinea-pig, erythema, eschar and desquamation of the epidermis were observed.
- Symptoms after inhalation : After 4-hour inhalation exposure of rats, there were no clinical signs attributed to the test article.
- Symptoms after eye contact : After instillation in eyes of rabbits, a single instillation elicited conjunctival irritation, which did not exceed a diffuse crimson colour in the sentinel rabbit, injection of the blood vasculature in the main study rabbits, swelling with partial eversion of the eyelids and some slight discharge were seen in all animals. All irritation reactions had resolved by four or five days after dosing.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray  
Dry chemical powder  
Alcohol resistant foam  
Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Jet of water.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.

#### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.  
Fight fire from safe distance and protected location.  
Do not breathe fumes.  
Cool closed containers exposed to fire with water spray  
If possible, take the containers out of dangerous zone.  
Contain fire-fighting water with dikes or absorbents to prevent migration and entry into sewers or streams.

Protection during firefighting : Wear suitable protective clothing, gloves, eye/face protection and respiratory protection.  
Wear a self-contained breathing apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures : Evacuate area.  
Ensure adequate ventilation.  
Avoid direct contact with the substance.  
Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters.  
Notify the authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.  
Once absorbed collect spilled material with shovels, buckets and place in closed containers and label properly.  
Remove as chemical waste, according to national or local legislation.  
In the event of major spillage: contact an expert.

#### 6.4. Reference to other sections

See sections 7-8-13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Read label before use.
- Do not handle until all safety precautions have been read and understood.
  - Avoid contact with eyes, skin, nose and mouth.
  - Avoid breathing dust, mist or spray.
  - Avoid contact during pregnancy/while nursing.
  - Wear suitable protective clothing, gloves and eye or face protection.
  - Opened containers must be carefully closed and kept upright to avoid leakage.
- Hygiene measures : Always wash your hands immediately after handling this product, and once again before leaving the workplace.
- Contaminated work clothing should not be allowed out of the workplace.
  - Do not eat, drink or smoke when using this product.
  - Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep in original containers, tightly closed.
- Store in a dry, cool and well-ventilated place.
  - Keep away from heat and direct sunlight.
  - Store locked up.
  - Keep away from combustible material.
  - Keep away from food, drink and animal feedingstuffs.
  - Keep locked up and out of the reach of children.
- Maximum storage period : 2 years.

### 7.3. Specific end use(s)

Fungicide for agricultural use. Refer to the label.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Mean exposure limit value of dusts = 10 mg/m<sup>3</sup>.

### 8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Protective clothing. Protective goggles. Gloves. Aerosol mask.



- Hand protection : Wear impervious gloves resistant to chemical. Nitrile rubber.
- Eye protection : Safety goggles or a face shield.
- Skin and body protection : Protective clothing with long sleeves waterproof and resistant to chemicals. Rubber boots.

|                                 |  |
|---------------------------------|--|
| Respiratory protection          | : Wear appropriate respirator for dust / organic vapors.   |
| Hygiene measures                | : Do not eat, drink or smoke while handling the product.<br>Clean gloves with soap and water before removing.<br>Wash hands and face with soap and water before eating, drinking or smoking.<br>Clean equipment, premises and work clothes regularly.<br>Work clothing should remain on the work area and stored separately from street clothes. |
| Environmental exposure controls | : Discharge into the environment must be avoided.<br>Do not contaminate surface and groundwater.   |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |                                      |
|--|--------------------------------------|
| Physical state                             | : Solid (free-flowing microgranules) |
| Colour                                     | : Olive to yellowish brown.          |
| Odour                                      | : wood.                              |
| Odour threshold                            | : No data available                  |
| pH   | : 7.2                                |
| pH solution                                | : 1%                                 |
| Relative evaporation rate (butylacetate=1) | : No data available                  |
| Melting point                              | : Not applicable (WG formulation)    |
| Freezing point                             | : Not applicable (WG formulation)    |
| Boiling point                              | : Not applicable (WG formulation)    |
| Flash point                                | : Not highly flammable.              |
| Self ignition temperature                  | : 159 °C                             |
| Decomposition temperature                  | : No data available                  |
| Flammability (solid, gas)                  | : No data available                  |
| Vapour pressure                            | : Not applicable (WG formulation)    |
| Relative vapour density at 20 °C           | : No data available                  |
| Relative density                           | : Not applicable (WG formulation)    |
| Density                                    | : 0.61 - 0.68 g/cm <sup>3</sup>      |
| Solubility                                 | : Not applicable (WG formulation)    |
| Log Pow                                    | : Not applicable (WG formulation)    |
| Log Kow                                    | : No data available                  |
| Viscosity, kinematic                       | : Not applicable (WG formulation)    |
| Viscosity, dynamic                         | : Not applicable (WG formulation)    |
| Explosive properties                       | : No explosive properties.           |
| Oxidising properties                       | : No oxidising properties.           |
| Explosive limits                           | : No data available                  |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No reactivity with packaging material after two-year storage at ambient temperature and after accelerated storage at 54°C for 14 days.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No additional information available.

**10.4. Conditions to avoid**

Avoid elevated temperatures, moisture and oxygen, which break down the product and induce flammable and toxic gas.

**10.5. Incompatible materials**

Avoid strong oxidizing agents, strong acids, quaternary ammonium salts, sequestering agents.

**10.6. Hazardous decomposition products**

Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

| <b>VALBON</b>       |                |
|---------------------|----------------|
| LD50 oral rat       | > 2000 mg/kg   |
| LD50 dermal rat     | > 2000 mg/kg   |
| LC50 inhalation rat | > 5.15 mg/l/4h |

Skin Irritation : Non skin irritant (rabbit)  
 Eye Irritation : Mild eye irritant (rabbit)  
 Corrosivity : Non corrosive (rabbit)  
 Sensitisation : Skin sensitizer (guinea pigs)  
 Repeated dose toxicity : Not classified  
 Carcinogenicity : Limited evidence of a carcinogenic effect.

| <b>Benthiavalicarb-isopropyl (177406-68-7)</b> |   |
|--|---|
| Carcinogenicity (rat)                          | Uterine adenocarcinoma (2years)   |
| Carcinogenicity (mouse)                        | Hepatocellular blastoma and carcinoma, thyroid follicular cell adenoma (2years) |

| <b>Mancozeb (8018-01-7)</b> |   |
|-----------------------------|---|
| Carcinogenicity (rat)       | Thyroid adenomas and carcinomas at high doses (2yers) |

Mutagenicity : Not classified

| <b>Benthiavalicarb-isopropyl (177406-68-7)</b> |                         |
|--|-------------------------|
| Mutagenicity                                   | No mutagenic potential. |

| <b>Mancozeb (8018-01-7)</b> |                         |
|-----------------------------|-------------------------|
| Mutagenicity                | No mutagenic potential. |

Toxicity for reproduction : Possible risk of harm to the unborn child.

| <b>Benthiavalicarb-isopropyl (177406-68-7)</b> |                           |
|--|---------------------------|
| Toxicity for reproduction                      | No reproductive toxicant. |

| <b>Mancozeb (8018-01-7)</b> |  |
|-----------------------------|--|
| Toxicity for reproduction   | Malformations at high doses in rats; embryo-/fetotoxicity (delayed ossification, abortions) at lower maternally toxic doses in rats and rabbits. |

**SECTION 12: Ecological information**

Toxicity for reproduction : Possible risk of harm to the unborn child.

**12.1. Toxicity**

| <b>VALBON</b>                                    |                  |
|--|------------------|
| LC50 Fishes ( <i>Oncorhynchus mykiss</i> )       | < 1 mg/l (96h)   |
| EC50 Daphnia                                     | < 1 mg/l (48h)   |
| ErC50 Algae ( <i>Selenastrum capricornutum</i> ) | > 1 mg/l (72h)   |
| LD50 oral Honey bee ( <i>Apis mellifera</i> )    | >100 µg a.s./bee |
| LD50 dermal Honey bee ( <i>Apis mellifera</i> )  | >100 µg a.s./bee |
| LC50 earthworm ( <i>Eisenia foetida</i> )        | 910.7 mg/kg      |

### 12.2. Persistence and degradability

Not readily biodegradable.

| <b>Benthiavalicarb-isopropyl (177406-68-7)</b> |  |
|--|--|
| DT50 soil                                      | 11-19 days (Laboratory study, aerobic, 20°C) |
| DT50 air                                       | 2.334 hours (Atkinson method of calculation) |
| DT50 water/sediment                            | 15-18 days (Laboratory study)                |

| <b>Mancozeb (8018-01-7)</b> |   |
|-----------------------------|---|
| DT50 soil                   | 1-3 hours (Laboratory study, aerobic, 20°C) |
| DT50 water                  | 0.6 – 14.4 hours (Laboratory study, 20°C)   |

### 12.3. Bioaccumulative potential

Not readily biodegradable.

### 12.4. Mobility in soil

| <b>Benthiavalicarb-isopropyl (177406-68-7)</b> |                         |
|--|-------------------------|
| Adsorption values                              | $K_{foc}$ 121-258       |
| Desorption values                              | $K_{foc}$ 167.5 - 390.2 |

| <b>Mancozeb (8018-01-7)</b> |                    |
|-----------------------------|--------------------|
| Adsorption values           | $K_{oc}$ 363-2334  |
| Desorption values           | $K_d$ 7.26 – 11.67 |

### 12.5. Results of PBT and vPvB assessment

Not relevant.

### 12.6. Other adverse effects

No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Apply triple washing procedure of the empty container and place the rinse water in the tank or container where the mixture is prepared. Handle empty containers and waste as established by the competent authorities.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No. : 3077



UN-No.(IATA) : 3077

**14.2. UN proper shipping name**

Proper Shipping Name : ENVIRONMETALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Mancozeb)  
Transport document description : UN 3077 ENVIRONMETALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Mancozeb), 9, III, (E)

**14.3. Transport hazard class(es)**

Class (UN) : 9  
Class (IATA) : 9 - Miscellaneous dangerous goods.  
Hazard labels (UN) : 9



**14.4. Packing group**

Packing group (UN) : III

**14.5. Environmental hazards**

Dangerous for the environment :  
Marine pollutant :

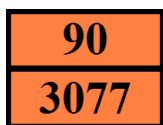


Other information : No supplementary information available.

**14.6. Special precautions for user**

**14.6.1. Overland transport**

Hazard identification number (Kemler No.) : 90  
Classification code (UN) : M7  
Orange plates :



Special provision (ADR) : 274, 335, 601  
Transport category (ADR) : 3  
Tunnel restriction code : E  
Limited quantities (ADR) : 5kg  
Excepted quantities (ADR) : E1  
EAC code : 2Z

**14.6.2. Transport by sea**

EmS-No. (1) : F-A,S-F

**14.6.3. Air transport**

No additional information available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

Contains no REACH candidate substance

**15.1.2. National regulations**

No additional information available.

**15.2. Chemical safety assessment**

No additional information available.

**SECTION 16: Other information**

Indication of changes :

| Change date | Previous Version | Section | Changed Item           | Change  | Comments |
|-------------|------------------|---------|------------------------|---------|----------|
| 20/01/2014  | 2.0              | 2       | R40, R63, S36/37, S57. | Added   |          |
|             |                  |         | Xi; R37, S23.          | Removed |          |

Full text of H- and EUH-phrases::

|                 |  |
|-----------------|--|
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Carc. 2         | Carcinogenicity Category 2                                     |
| Repr. 2         | Reproductive toxicity Category 2                               |
| Skin Sens. 1    | Skin sensitisation Category 1                                  |
| H317            | May cause an allergic skin reaction                            |
| H351            | Suspected of causing cancer                                    |
| H361            | Suspected of damaging fertility or the unborn child            |
| H400            | Very toxic to aquatic life                                     |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*