

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

1.1. Product identifier

Trade Name: Bordeaux Mixture 20% + Mancozeb 8% WP

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

Identified uses: Fungicide

Uses advised against: You must not use for other purposes other than those described in the product.

1.3. Details of the supplier of the safety data sheet

Supplier: **INDUSTRIAS QUIMICAS DEL VALLÉS, S.A.**
Address: Av. Rafael Casanova, 81
08100 – Mollet del Vallés (Barcelona) - Spain
Telephone number: (34) 935.796.677
Fax: (34) 935.791.722
E-mail address for a competent person responsible for the safety data sheet: fsegur@iqvagro.com

1.4. Emergency telephone number

Availability: (00 34) 935.796.677
(8:00 AM - 17:00 PM EST)

Other comments: No information available.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP Classification table

Classification according to Regulation (EC) 1272/2008

Hazard Classes/ categories	Hazard statement(s)
Acute Tox. Inhalation – Cat. 4	H332 Harmful if inhaled
Repr. – Cat. 2	H361d Suspected of damaging the unborn child
Aquatic Acute – Cat. 1	H400 Very toxic to aquatic life
Aquatic Chronic – Cat. 1	H410 Very toxic to aquatic life with long lasting effects

2.2. Label elements

Labelling according to Regulation (EC) 1272/2008



Signal word

Warning

Hazard statement(s)

H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child .
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust and spray.
P280 Wear chemical protective gloves and protective clothing.
P308+P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.
P501 Dispose of contents/container to an authorised hazardous waste collection site in accordance with national regulation.

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

EUH208: Contains Mancozeb. May produce an allergic reaction.

Authorisation REACH number(s) : Not applicable

2.3. Other hazards

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Compliance with PBT/vPvB criteria : There are no risks in accordance with Regulation 1999/45 of the EC or not classified as PBT or vPvB

Other hazards which do not result in classification: The substance/mixture is not classified as SVHC.

2.4. Phrases for special risks. : SP1: Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	Content (%)	EC number	CAS Number	Classification Regulation (EC) 1272/2008	Hazard statement(s)*
BORDEAUX MIXTURE TECHNICAL	72.7 – 78.4	-	8011-63-0	Acute Tox. Inhalation 4 Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1	H332 H318 H400 H410
MANCOZEB TECHNICAL	80	-	8018-01-7	Skin Sens. 1 Repr. 2 Aquatic Acute 1	H317 H361 H400

(*) See the full text of the hazard statements and risk phrases in section 16.

Composition (%) : Bordeaux Mixture (20% exp. as Cu w/w) Mancozeb (8% exp. as Mancozeb w/w)

SECTION 4: First aid measures

4.1. Description of first aid measures

General notes: If symptoms persists, call a physician.

In case of inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air. Obtain medical advice.

In case of contact with skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops.

In case of contact with eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

En case of ingestion: Check breathing
If necessary artificial respiration.
Keep the patient at rest
Maintain body temperature
Never give anything by mouth to an unconscious person.
If swallowed, do not induce vomiting.
If the person is unconscious lay her on her side with the head lower than the rest of the body and semiflexed knees.
Request attention medical and show this tab or label.

Recommendations for first aid responders: Use suitable protective clothing

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

Most important symptoms and effects, both acute and delayed: Risk of renal and hepatic alterations
Burning pain in the mouth and pharynx, nausea, watery and bloody stools, diarrhea, decrease in blood pressure.
Sweating, tearing, and seizures
Headache and weakness may occur, proceeding to fainting or unconsciousness

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

Indication of any immediate medical attention and special treatment needed: Not determinated

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use dry chemical or CO2.

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Unsuitable extinguishing media: Collect contaminated fire-fighting water separately. It must not enter the sewage system.
Water jet from high flow (due to risk of contamination).

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Not known.

Other specific hazards: Not known.

5.3. Advice for firefighters

Advice for firefighters: Wear suitable protective clothing and dust mask with filter for chemicals.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Do not breathe the powder.
Avoid contact with mouth, eyes and skin.
Keep unauthorised people, children and animals away from the spillage area
Wear suitable protective clothing and gloves to prevent contamination

For emergency responders: Not available

6.2. Environmental precautions

Environmental precautions: Keep out of waterways.

6.3. Methods and material for containment and cleaning up

Containment: Construction of barriers of protection, drains and coating methods.

Cleaning: Cover the product with sawdust, sand or dry land, sweep it, insert it into a dry container, cover it, identify it and dispose in an authorized place.
Do not clean the area contaminated with water.

Other information: Do not use brushes or compressed air to clean surfaces or clothing

6.4. Reference to other sections

Reference to other sections: No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Containment and measures to prevent fire: The job and the methodology should be organized in such a way that direct contact with the product is minimized or prevented. Handle with care. Workspaces Use with adequate ventilation and safety showers presence next.

Measures to prevent aerosol and dust generation: Avoid spills and leaks

Measures to reduce the release of the substance or mixture to the environment: No information available.

Advice on general occupational hygiene: No information available.

7.2. Conditions for safe storage, including possible incompatibilities

Technical measures and storage conditions: Store the product in its original container, closed and tagged, in cool, dry, ventilated and away from food, beverages and feed. Keep out of reach of children, animals and unauthorized personnel.

Packaging materials: -

Requirements for storage rooms and vessels: Storage Keep container closed after use. Avoid high temperatures and frost.

Further information on storage conditions: No data available

7.3. Specific end use(s)

Recommendations: The product is for plant protection use.

Industrial sector specific solutions: -

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No DNEL data.

Information on monitoring procedures: Not available

Currently recommended monitoring methods: Not available

Specific monitoring standards: No information available.



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There are not data of PNEC
Control banding approach ("control banding"):

Good industrial hygiene practices

8.2. Exposure controls

Appropriate engineering controls:

Appropriate exposure control measures related to the identified use(s) of the substance or mixture:

Structural measures to prevent exposure: No information available.

Organisational measures to prevent exposure: No information available.

Technical measures to prevent exposure: No information available.

Individual protection measures, such as personal protective equipment

Eye/Face protection: Avoid contact. Safety glasses with side-shields.

Hand Protection: Wear gloves. (Dexter CE 95 0072 4121 according to EEC/89/686). After use, wash with soap and water.

Others: Mittens, boots or coverall depending on the hazards associated with the substance or mixture and the possibilities of contact.

Respiratory Protection: In case of insufficient ventilation use respiratory equipment while preparing the mixture. (Affinity FR FFP1 D - CE 0121 according to EN 149:2001)
Do not breathe dust. Full-face mask.

Thermal hazards: Not available

Skin Protection: Wear suitable clothing to avoid repeated or delayed contact with skin. Thoroughly wash working clothes daily. After use, wash with soap and water.

Environmental exposure controls

Appropriate exposure control measures related to the identified use(s) of the substance or mixture:

Structural measures to prevent exposure: No information available.

Organisational measures to prevent exposure: No information available.

Technical measures to prevent exposure: No information available.

Technical measures to prevent exposure: No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Blue powder

Odour: Odourless

Odour threshold: No data available

pH-value at 1%: 6 - 7.5 (20 °C)

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: >61 °C

Evaporation Rate: No data available

Flammability (solid, gas): Non-flammable

Upper/lower flammability or explosive limits: No data available

Vapour pressure: No data available

Vapour density: No data available

Relative density: 0.55 - 0.7 g/ml (20 °C)

Solubility (is): Water solubility:

Bordeaux mixture technical: practically insoluble.

Mancozeb technical: 6 - 20 mg/l .

Fat solubility: Bordeaux mixture technical: insoluble.

Mancozeb technical: insoluble in common solvents.

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: >600 °C

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Decomposition temperature: No data available
 Viscosity: No data available
 Explosive properties: Non-explosive
 Oxidising properties: No data available

9.2. Other information

Other information: No data available

SECTION 10: Stability and reactivity
10.1. Reactivity

Reactivity: No data available

10.2. Chemical stability

Chemical stability: Stable under normal conditions of storage for a period of 2 years, as minimum.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions: No data available

10.4. Conditions to Avoid

Conditions to Avoid: Moisture and temperatures above 40 ° C

10.5. Incompatible materials

Incompatible materials: Acids and ammonium salts partially dissolve the product
 Strong oxidizing agents, alkaline conditions, ferric metals.

10.6. Hazardous decomposition products

Hazardous decomposition products: Bordeaux Mixture decomposes above 200 °C producing sulfur oxides (SO_x)
 Other dangerous decomposition products likely to be produced: SO_x, CO_x, NO_x.
 It does not decompose if stored and applied as directed.

SECTION 11: Toxicological information
11.1. Information on toxicological effects

11.1.2. Mixtures		Results
Acute toxicity	Ingestion: LD50	rat > 2000 mg/kg
	Inhalation: LC50	Rat > 4.77 mg/l (4h)
	Skin: LD50	rat > 2000 mg/kg
Irritation:		Skin: No oedema, no erythema (rabbit) Eye: Non irritant (rabbit)
Corrosivity:		No information available.
Sensitisation:		Non sensitizer (Guinea pig)
Repeated dose toxicity:		No information available.
Carcinogenicity:		No information available.
Mutagenicity:		No information available.
Toxicity for reproduction:		[Mancozeb]>3%. Mancozeb is classified as toxic for reproduction cat. 2.

Information on likely routes of exposure: There is no evidence of symptoms associated with this substance/mixture
 Main effects: No data available
 Delayed and immediate effects as well as chronic effects from short and long-term exposure: No information available.
 Interactive effects: No information available.
 Other information: No information available.

SECTION 12: Ecological information
12.1. Toxicity
Acute toxicity (short-term)

Fishes: LC₅₀ / 96 h / *O. Mykiss* = 0.018 mg Cu/l
 Crustaceans: No information available.
 Algae: No information available.
 Other aquatic plants: No information available.
 Micro-organisms: No information available.
 Aquatic invertebrates: No information available.
 Macro-organisms: No information available.

Environmental toxicity



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Birds: No information available.
Bees: No information available.
Plants: No information available.

Chronic (long-term) toxicity

Fish: No information available.
Crustaceans: No information available.
Algae: $E_{yC_{50}} / Pseudokirchneriella\ subcapitata / 72h = 0.010\ mg\ Cu/l$
Other aquatic plants: No information available.
Microorganisms: No information available.
Macroorganisms: No information available.

Environmental toxicity

Birds: No information available.
Bees: No information available.
Plants: No information available.

12.2. Degradability

Abiotic Degradation: No information available.
Physical- and photo-chemical elimination: No information available.
Biodegradation: No information available.
Other processes: - Bordeaux Mixture technical: Copper is strongly absorbed by soils, and it does not degrade.
- Mancozeb Technical: Mancozeb is rapidly hydrolyzed. Undergoes hydrolytic degradation, oxidative, photolytic and microbial. DT50: 6-15 days.

12.3. Bioaccumulative potential

Partition coefficient n-octanol /water (Kow): No information available.
Bioconcentration factor (BCF): - Bordeaux Mixture technical: Copper does not bioaccumulate. Organisms excrete copper naturally.
- Mancozeb Technical: not bioaccumulate.

12.4. Mobility in soil

Known or predicted distribution to environmental compartments: - Bordeaux Mixture technical: Copper that is added to the soil mainly becomes bound to organic material. The content of organic material in the soil and the pH determine the degree of copper availability. Through the strong bounding to various soil components, the leaching out of copper is extremely low. Mobility in soil towards deeper layers is negligible.
- Mancozeb: not volatile. It is very mobile in soils.

Surface tension: No information available.
Adsorption/Desorption: No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment: This mixture does not contain any substance that has been assessed as PBT or vPvB

12.6. Other adverse effects

Other adverse effects: No information available.
Environmental fate: No information available.
Photochemical ozone creation potential: No information available.
Ozone depletion potential: No information available.
Endocrine disrupting potential: No information available.
Global warming potential: No information available.

12.7. Other information

Other information: No information available.

12.8. Ecotoxicity

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

12.9. Toxicological effects

Toxicological effects: No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of waste treatment of both substance or mixtures: Waste should not be removed through the sewer. The elimination will be followed according to local, State or national provisions, either by incineration or recycling.

Appropriate methods of waste treatment of contaminated packaging: The elimination will be followed according to local, State or national provisions. Either by incineration or recycling.



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Waste codes / waste designations according to LoW:

Appropriate methods of waste treatment of both substance or mixtures:

Appropriate methods for the elimination of contaminated packaging:

Special precautions:

Community/national/regional provisions relating to waste management:

Community/national/regional provisions relating to waste:

No information available.

No information available.

No information available.

No information available.

No information available.

The elimination will be followed according to local, State or national provisions.

SECTION 14: Transport information

ADR/RID

UN Number:

UN3077

Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains BORDEAUX MIXTURE, MANCOZEB TECHNICAL)

Class:

9



ADR/RID Classification:

M7

Packing group:

III

Label:

9

Special Provisions:

274,335,601

Limited Quantities:

5 kg

Packing Instructions:

P002,IBC08,LPO2,R001

Special Packing Provisions:

VV1

Hazard identification number:

90

Kemler Code:

000

IMDG

Marine Pollutant:

Yes

UN Number:

UN3077

Packing group:

-

Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains BORDEAUX MIXTURE, MANCOZEB TECHNICAL)

Class:

-

Label:

-

EmS Guide:

F-A, S-F

IATA

UN Number:

UN3077

Packing group:

-

Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains BORDEAUX MIXTURE, MANCOZEB TECHNICAL)

Class:

-

Label:

-

SECTION 15: Regulatory information

EU regulations:

No information available.

Phytosanitary Registration Number.:

A plant protection registration number has not been declared.

Use authorizations:

Fungicide

Use restrictions:

You must not use for other purposes other than those described in the product.

Other EU regulations:

No information available.

Information on emission of volatile organic

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compounds (VOC): No information available.
National regulations: No information available.

15.2. Chemical safety assessment

Chemical safety assessment: No information available.

SECTION 16: Other information

Reason for revision: Updating to regulation (EC) 2015/830 amending Annex II of regulation 1907/2006 REACH. Updating of harmonization classification of bordeaux mixture according to annex from CLP regulation.
Changes to the previous version: Section 3.2

Labelling according to directives 67/548/EEC and 1999/45/EC

Symbol(s) of danger - Indication(s) of danger

N: Dangerous for the environment

Xn: Harmful



Risk Phrases

R20: Harmful by inhalation.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63: Possible risk of harm to the unborn child.

Safety Phrases

S 2: Keep out of the reach of children.

S13: Keep away from food, drink and animal feedingstuffs.

S20: When using do not eat or drink.

S21: When using do not smoke.

S22: Do not breathe dust.

S36: Wear suitable protective clothing.

S37: Wear suitable gloves.

S38: In case of insufficient ventilation wear suitable respiratory equipment.

S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Abbreviations and acronyms:

SDS: Safety Data Sheet

OEL: Occupational Exposure Limit

NACE: Nomenclature Générale des Activités Économiques dans les Communautés Européennes (French, EU classification system)

TRGS: Real Time Gross Settlement

OECD: Organisation for Economic Co-operation and Development

PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very Persistent and very Bioaccumulative

DNEL: Derived non-effect level

PNEC: Predicted non-effect concentration

LC50: Lethal concentration 50%

LD50: Lethal dose 50%

NOEL: Non-observed effect level

NOAEL: Non observed adverse effect level

NOAEC: Non observed adverse effect concentration

SVHC: Substances of Very High Concern

Key literature references and sources for data:

REACH Registraton dossier and database of registered substances on the European Chemicals Agency (ECHA).

Indication of which of the methods of



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evaluating information referred to in Article 9 of Regulation (EC) No 1272/2008 was used for the purpose of classification:

No information available.

Relevant hazard statements mentioned in section 3:

Hazard statement(s)

H317: May cause an allergic skin reaction

H318: Causes serious eye damage

H332: Harmful if inhaled

H361: Suspected of damaging fertility or the unborn child .

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects

Advice on any training appropriate for workers:

No information available.

Other information:

This information is based on the knowledge we have so far. This SDS refers exclusively to this product. All chemical substances in this product have been reported or are exempt from notification under notification to the EC laws.

Information in this SDS is based on the available published sources and is believed to be accurate. No warranty, express or implied, is made and our company assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application. The specifications of this safety data sheet describes the safety requirements of our product, this is not a guarantee of characteristics. They are based on current state.