



Mazinga™ ADV Fungicide

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

| | |
|---------------------------|------------------------|
| Chemical Name | Mixture |
| Trade Names | Mazinga™ ADV Fungicide |
| CAS No. | Mixture |
| EPA Identification Number | EPA Reg. No. 35915-18 |

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

| | |
|----------------------|--|
| Identified Use(s) | Fungicide |
| Uses Advised Against | Do NOT aerosolize or atomize to produce inhalable-size particles. |

Details of the supplier of the safety data sheet

| | |
|------------------------|--|
| Company Identification | Oxon Italia S.p.A. 2525 Meridian Parkway, Suite 350 Durham, NC 27713 United States of America |
| Telephone | (919) 226-1195 |

Emergency telephone number

| | |
|---------------------|---|
| Emergency Phone No. | CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted) |
|---------------------|---|

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

| | |
|-----------------------------|--|
| OSHA HCS (29 CFR 1910.1200) | Acute Tox. 2; Carc. 2; Eye Irrit. 2; STOT SE 3 |
|-----------------------------|--|

Label elements

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS) and for workplace labels of non pesticide chemicals. The labeling information below applies to non-pesticide workplace labels. For pesticide label information, refer to Section 15.

Hazard Symbol(s)



DANGER

Signal Word(s)

Hazard Statement(s)

Fatal if inhaled (Aerosol).
May cause respiratory irritation (Aerosol).
Causes serious eye irritation.
Suspected of causing cancer.

Precautionary Statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Use of high-pressure spray may cause toxic aerosols. Use only outdoors or in a well-ventilated area.



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In case of inadequate ventilation wear respiratory protection.

Wash hands and exposed skin after use.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.

Other hazards

May cause an allergic skin reaction. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Additional Information

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Composition/information on ingredients | %W/W | CAS No. | Hazard Statement(s) |
|--|-------|-------------|--|
| Chlorothalonil | 25.69 | 1897-45-6 | Acute Tox. 2; H330 Eye Dam. 1; H318 Carc. 2; H351 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 |
| Tetraconazole | 2.09 | 112281-77-3 | Acute Tox. 4; H302; H332 Aquatic Acute 2; H401 Aquatic Chronic 2; H411 |

Additional Information –

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact

Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Call a POISON CENTER or doctor/physician if you feel unwell. Treat symptomatically.

Most important symptoms and effects, both acute and delayed

Fatal if inhaled (Aerosol).

Indication of any immediate medical attention and special treatment needed

IF INHALED: Immediately call a POISON CENTER or doctor/physician.



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SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media
- Unsuitable Extinguishing Media

Non-combustible. As appropriate for surrounding fire.
None known

Special hazards arising from the substance or mixture

Combustion or thermal decomposition will evolve toxic and irritant vapours. Decontaminate equipment or materials used in pesticide fires.

Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Do not get in eyes. Avoid contact with skin. Do not breathe mist/spray. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

Environmental precautions

Prevent substance entering sewers.

Methods and material for containment and cleaning up

Cover spills with inert absorbent material. Transfer to a container for disposal or recovery. Collect spillage. Wash the spillage area with water. If possible prevent water running into sewers.

Reference to other sections Additional Information

None
None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do **NOT** aerosolize or atomize to produce inhalable-size particles. Do not get in eyes. Avoid contact with skin. Do not breathe mist/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection.

Conditions for safe storage, including any incompatibilities

-Storage temperature

Store in a well-ventilated place. Keep container tightly closed. Do not allow material to freeze. Store locked up.

-Incompatible materials

Strong oxidizing agents or reducing agents. Strong acids / bases.

Specific end use(s)

Fungicide.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

| SUBSTANCE. | CAS No. | (8hr TWA) | | (STEL) | | Note: |
|------------|---------|------------|-------------|------------|-------------|-------|
| | | PEL (OSHA) | TLV (ACGIH) | PEL (OSHA) | TLV (ACGIH) | |
| None | ----- | ----- | ----- | ----- | ----- | ----- |

Exposure controls

Appropriate engineering controls

Do **NOT** aerosolize or atomize to produce inhalable-size particles. Use low-pressure coarse spray only.



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Personal protection equipment

Eye/face protection



Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other)



Gloves (PVC, Neoprene, or Natural rubber).

Respiratory protection



Wear suitable respiratory protective equipment if exposure to high levels of material are likely. Observe directions on label and instructions for use.

Thermal hazards

Not normally required.

Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses. Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|---|---------------------------------|
| Appearance | Liquid |
| Color. | Milky white |
| Odor | Mild bitter |
| Odor Threshold (ppm) | Not available |
| pH (Value) | 5.91 |
| Melting Point/Freezing Point (°C) | Not available |
| Boiling point/boiling range (°C) | Not applicable |
| Flash Point (°C) | Non-combustible / Non-flammable |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not applicable |
| Explosive Limit Ranges | Not applicable |
| Vapour Pressure (mm Hg) | Not available |
| Vapour Density (Air=1) | Not available |
| Density (g/ml) | 1.179 (9.84 lb/gal) at 24 °C |
| Specific Gravity | Not available |
| Solubility (Water) | 9.84 lb/gal @24 °C |
| Solubility (Other) | Not available |
| Partition Coefficient (n-Octanol/water) | Not available |
| Auto Ignition Point (°C) | Non-combustible / Non-flammable |
| Decomposition Temperature (°C) | Not available |
| Kinematic Viscosity (cSt) | 899 @ 25 °C |
| Explosive properties | Not explosive |
| Oxidizing properties | Not oxidising |

Other information

Does not react to water or ammonium phosphate. It does react to iron powder and potassium permanganate

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions.

Chemical stability

Stable.

Possibility of hazardous reactions

None anticipated.



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Conditions to avoid

Incompatible materials.

Incompatible materials

Strong oxidizing agents or reducing agents. Strong acids / bases.

Hazardous decomposition product(s)

Combustion or thermal decomposition will evolve toxic and irritant vapours: acrid smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

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Irritation/Corrosivity

Causes serious eye irritation. Unlikely to cause skin irritation.

Chlorothalonil (CAS#1897-45-6):

Acute toxicity (calculated / estimated)

Oral: LD50 ~3260 mg/kg-bw (rat)

Dermal: LD50 ~2020 mg/kg-bw (rat)

Inhalation: LC50 0.1 mg/L (4 hr) (rat) (Inhalable Dust) - May cause respiratory irritation

Irritation/Corrosivity

Causes serious eye damage.

Sensitization

Based on reliable animal studies, the substance is not a skin sensitizer except possibly in the presence of a carrier solvent such as acetone.

The substance may be a weak skin sensitizer based on a relatively small number of physician's clinical reports from exposed workers and, therefore, the potential for skin sensitization cannot be completely ruled out.

Repeated dose toxicity

Not to be expected.

Carcinogenicity

Suspected of causing cancer.

| NTP | IARC | ACGIH | OSHA |
|-------------------|------|-------|------|
| Animal carcinogen | 2B | No. | No. |

Mutagenicity

Not to be expected.

Reproductive toxicity

Not to be expected.

Tetraconazole (CAS# 112281-77-3):

Acute toxicity (calculated / estimated)

Oral LD50: 1031 - 1248 mg/kg-bw (rat)

Dermal LD50: >2000 mg/kg-bw (rabbit)

Inhalation LC50: > 3.66 mg/L (4 hr) (rat)

Irritation/Corrosivity

Unlikely to cause skin irritation. May cause eye irritation.

Sensitization

Not to be expected.

Repeated dose toxicity

Not to be expected. NOAEL (90 day) = 4.1 mg/kg (rat)

Carcinogenicity

Not to be expected.

| NTP | IARC | ACGIH | OSHA |
|-----|------|-------|------|
| No | No | No | No |

Mutagenicity

Not to be expected.

Reproductive toxicity

Not to be expected.



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SECTION 12: ECOLOGICAL INFORMATION

Chlorothalonil (CAS# 1897-45-6):

Ecotoxicity

| | |
|------------|---|
| Short term | LC50 (96 hour): 0.012 mg/L(fish) EC50 (48 hour): 0.0342 – 0.143 mg/L (crustacea) |
| Long Term | Very toxic to aquatic life with long lasting effects. |

Persistence and degradability

Not persistent.

Bioaccumulative potential

The substance has low potential for bioaccumulation.

Mobility in soil

The substance has low mobility in soil.

Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

Other adverse effects

None known.

Tetraconazole (CAS# 112281-77-3):

Ecotoxicity

| | |
|-------------------------------------|---|
| Short term (estimated / calculated) | LC50 (96 hour): 4.3 - 4.8 mg/L(fish) EC50 (48 hour): 3 mg/L (<i>Daphnia magna</i>) EC50 (72 hour): 0.41 mg/l (<i>scenedesmus subspicatus</i>) |
| Long Term | Toxic to aquatic life with long lasting effects. |

Persistence and degradability

Persistent

Bioaccumulative potential

No data

Mobility in soil

The product has moderate mobility in soil.

Results of PBT and vPvB assessment

No data

Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Additional Information None known.

SECTION 14: TRANSPORT INFORMATION

| | Land transport (U.S. DOT) * | Sea transport (IMDG) | Air transport (ICAO/IATA) |
|------------------------------|--|-------------------------|------------------------------|
| UN number | UN 3082 | UN 3082 | UN 3082 |
| Proper Shipping Name | Environmentally hazardous substance, liquid, n.o.s. (Chlorothalonil & Tetraconazole) | | |
| Transport hazard class(es) | 9 | 9 | 9 |
| Packing group | III | III | III |
| Hazard label(s) | Marine Pollutant | Marine Pollutant | Marine Pollutant |
| Environmental hazards | Yes | Yes | Yes |
| Special precautions for user | None Assigned | None Assigned | None Assigned |

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

* Not regulated for ground shipments in the U.S. in non-bulk packaging (<119 gallons).

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:



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TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or exempt.

EPA FIFRA Information for SDS Section 15 (Regulatory Information):

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non pesticide chemicals.

The hazard information required on the pesticide label is reproduced below:

WARNING

Warning. May be fatal if inhaled. Causes moderate eye irritation. Do not breathe spray mist. Remove and wash contaminated clothing before reuse. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Mixers, loaders, applicators and all other handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves made of waterproof material, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene, polyvinyl chloride, or viton
- A non-powered, air purifying respirator equipped with an organic-vapor (OV) removing cartridge plus an R- or P series filter, OR a non-powered air-purifying canister type respirator equipped with an organic vapor canister that uses an R- or P- series air-purifying filter.

User Safety Requirements:

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.

Engineering Controls:

When handlers used closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS:

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS:

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Ground Water Advisory

Chlorothalonil, one of the active ingredients in this product, is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

This product can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Physical Hazards



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Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

| Chemical Name | CAS No. | Typical %wt. | RQ (Pounds) |
|---------------|---------|--------------|-------------|
| None | ----- | ----- | ----- |

SARA 311/312 - Hazard Categories:

Fire Sudden Release Reactivity Immediate (acute) Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

| Chemical Name | CAS No. | Typical %wt. |
|----------------|-----------|--------------|
| Chlorothalonil | 1897-45-6 | 25.69 |

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

| Chemical Name | CAS No. | Typical %wt. | RQ (Pounds) | TPQ (Pounds) |
|---------------|---------|--------------|-------------|--------------|
| None | ----- | ----- | ----- | ----- |

Proposition 65 (California):

| Chemical Name | CAS No. | Typical %wt. | Hazards |
|----------------|-----------|--------------|---------|
| Chlorothalonil | 1897-45-6 | 25.69 | Cancer |

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16.

Date of preparation: February 7, 2017

Hazard Statement(s) Listed in: Section 3:

- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H330: Fatal if inhaled.
- H331: Toxic if inhaled.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H400: Very toxic to aquatic life.
- H401: Toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H411: Toxic to aquatic life with long lasting effects.

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