



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)
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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
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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
- Incompatible materials

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