

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

Chemical Name	Mixture
Trade Names	Arius™ Advance
CAS No.	Mixture
EPA Identification Number	EPA Reg. No. 60063-57

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

Identified Use(s)	Fungicide
Uses Advised Against	It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

Company Identification	Sipcam Agro USA, Inc. 2525 Meridian Parkway 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; Eye Irrit. 2B; Carc. 2; STOT SE 3
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**Label elements**

This is a pesticide product registered with 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)



Signal Word(s)

**DANGER**

Hazard Statement(s)

Fatal if inhaled (Aerosol).  
Suspected of causing cancer.  
Causes eye irritation.  
May cause respiratory irritation (Aerosol).  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement(s)

Wear respiratory protection.

Wash hands and exposed skin thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is laboured, administer oxygen. Treat symptomatically.

**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:** Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention. Treat symptomatically. Contaminated clothing should be laundered before reuse.

**IF exposed or concerned:** Get medical advice/attention. Treat symptomatically.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice. Observe directions on label and instructions for use. See Also Section 15.

**Other hazards**

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Contains: Chlorothalonil. May produce an allergic reaction in persons already sensitised.

**Additional Information**

None

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	%W/W	CAS No.	Hazard Statement(s)
Chlorothalonil	~ 44	1897-45-6	Acute Tox. 2; H330 Eye Dam. 1; H318 Skin Sens. 1B; H317 Carc. 2; H351 STOT-SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Azoxystrobin	~ 12	131860-33-8	Acute Tox. 3; H331 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410

**Additional Information –** None

## 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/doctor. If breathing is laboured, administer oxygen. Treat symptomatically.

Skin Contact	Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention. Treat symptomatically. Contaminated clothing should be laundered before reuse.
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	Do not give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell. Rinse mouth.
<b>Most important symptoms and effects, both acute and delayed</b>	Fatal if inhaled. Contains: Chlorothalonil. May produce an allergic reaction in persons already sensitised.
<b>Indication of any immediate medical attention and special treatment needed</b>	Call a POISON CENTER or doctor/physician if you feel unwell.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

- Suitable Extinguishing Media
- Unsuitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or water spray.  
None known.

### Special hazards arising from the substance or mixture

Combustion or thermal decomposition will evolve toxic and irritant vapours. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds. 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, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mist/vapours/spray. Wear suitable respiratory protective equipment if exposure to high levels of material are likely.

### Environmental precautions

Observe directions on label and instructions for use. See Also Section 15.

### Methods and material for containment and cleaning up

Observe directions on label and instructions for use. See Also Section 15.

### Reference to other sections

Observe directions on label and instructions for use. See Also Section 15.

### Additional Information

None

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Do not breathe mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Wash hands and exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Observe directions on label and instructions for use. See Also Section 15.

### Conditions for safe storage, including any incompatibilities

- Storage temperature
- Incompatible materials

Store at room temperature. Do not allow material to freeze.  
Strong oxidising agents. Substances that react with water.

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. Observe directions on label and instructions for use. See Also Section 15.

#### Personal protection equipment

##### Eye/face protection



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

##### Skin protection (Hand protection/ Other)



Gloves. Observe directions on label and instructions for use. See Also Section 15.

##### Respiratory protection



Observe directions on label and instructions for use. See Also Section 15.

##### Thermal hazards

Not normally required.

#### Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses. Observe directions on label and instructions for use. See Also Section 15.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Liquid Suspension
Colour.	Opaque Off-White
Odour	Moderate Bitter
Odour Threshold (ppm)	Not available.
pH (Value)	5.28
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	100.46 - 162.00
Flash Point (°C)	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Explosive Limit Ranges	Not available.
Vapour pressure (Pascal)	Not available.
Vapour Density (Air=1)	Not available.
Density (g/ml)	1.2957 g/mL



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Solubility (Water)	Not available.
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	Not available.
Auto Ignition Point (°C)	Not available.
Decomposition Temperature (°C)	Not available.
Kinematic Viscosity (cSt)	157.11 @ 25 °C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
<b>Other information</b>	Not available.

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	No hazardous reactions known if used for its intended purpose.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None anticipated.
<b>Conditions to avoid</b>	Incompatible materials
<b>Incompatible materials</b>	Strong oxidising agents. Substances that react with water.
<b>Hazardous decomposition product(s)</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds. Decontaminate equipment or materials used in pesticide fires.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes:** Inhalation, Skin Contact, Eye Contact

### Information on toxicological effects

#### Substances

Not applicable

#### Mixtures

Acute toxicity

Oral: LD50 = 2866 mg/kg-bw (rat)  
Dermal: LD50 >5050 mg/kg-bw (rat)  
Inhalation: LC50 = 0.17 mg/L (rat)(Aerosol)

Skin corrosion/irritation

Unlikely to cause skin irritation.

Serious eye damage/irritation

Causes eye irritation.

Respiratory or skin sensitization

It is not a skin sensitiser in animal tests.

Germ cell mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

STOT - single exposure

Not available.

STOT - repeated exposure

Not available.

Aspiration hazard

Not available.

#### Substances in preparations / mixtures

Chlorothalonil (CAS#1897-45-6):

Acute toxicity

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.

Azoxystrobin (CAS # 131860-33-8):

**Acute toxicity**

Oral: LD50 >5000 mg/kg (rat)  
Dermal: LD50 >2000 mg/kg (rat)  
Inhalation: LC50 = 0.698 - 0.962 mg/L (rat) (4 hr)

**Irritation/Corrosivity**

Causes serious eye irritation.

**Sensitization**

Not to be expected.

**Repeated dose toxicity**

Not to be expected.  
- NOEL: 20.4 mg/kg/day (90 day oral , rat)

**Carcinogenicity**

Not to be expected.  
- NOEL: 18.2 mg/kg/day

NTP	IARC	ACGIH	OSHA
No.	No.	No.	No.

**Mutagenicity**

Evidence of genotoxicity.

**Reproductive toxicity**

Not to be expected.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

Chlorothalonil (CAS# 1897-45-6):

**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.

Azoxystrobin (CAS # 131860-33-8):

**Short term**

EC50 (96 hour): 0.47 mg/L (*Oncorhynchus mykiss*)  
EC50 (48 hour): 0.259 mg/L (*Daphnia magna*)

**Long Term**

NOEC : 0.084 mg/L (*Daphnia magna*)

**Persistence and degradability**

Part of the components are poorly biodegradable.

**Bioaccumulative potential**

Not determined.

**Mobility in soil**

Not determined.

**Results of PBT and vPvB assessment**

Not classified as PBT.

**Other adverse effects**

None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>Waste treatment methods</b>	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice. Observe directions on label and instructions for use. See Also Section 15.
<b>Additional Information</b>	None known.

## SECTION 14: TRANSPORT INFORMATION

	<b>Land transport (U.S. DOT) *</b>	<b>Sea transport (IMDG)</b>	<b>Air transport (ICAO/IATA)</b>
<b>UN number</b>	Not classified as dangerous for transport. *	UN 3082	UN 3082
<b>Proper Shipping Name</b>		Environmentally hazardous substance, liquid, n.o.s. (Chlorothalonil & Azoxystrobin)	
<b>Transport hazard class(es)</b>		9	9
<b>Packing group</b>		III	III
<b>Hazard label(s)</b>		Marine Pollutant	Marine Pollutant
<b>Environmental hazards</b>		Yes	Yes
<b>Special precautions for user</b>		None Assigned	None Assigned

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

\* For bulk shipments in U.S., can be shipped as UN3082, Environmentally hazardous substance, liquid, n.o.s. (Chlorothalonil & Azoxystrobin), 9, PG III

## SECTION 15: REGULATORY INFORMATION

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

**TSCA (Toxic Substance Control Act) - Inventory Status:** This is a registered pesticide product regulated under Federal Insecticide, Fungicide, and Rodenticide Act and, therefore, the components of this product are not subject to listing on the TSCA inventory.

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

This is a pesticide product registered with 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:** May be fatal if inhaled. Do not breathe spray mist. Wear appropriate respiratory protection. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Human flagging is prohibited.

**Personal Protective Equipment (PPE):**

All handlers must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber ≤ 14 mils, nitrile rubber ≤ 14 mils, neoprene rubber ≤ 14 mils, natural rubber ≤ 14 mils, polyethylene, polyvinyl chloride ≤ 14 mils, or viton ≤ 14 mils
- A NIOSH approved particulate respirator with any R or P filter with NIOSH approval number prefix TC- 84A, or a NIOSH approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

Follow the 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.



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## 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.

## Environmental Hazards:

Azoxystrobin is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Chlorothalonil 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.

## Groundwater Advisory

Azoxystrobin can be persistent for several months or longer. Azoxystrobin has degradation products which have products similar to chemicals which are known to leach through soil into groundwater under certain conditions as a result of label use. Chlorothalonil 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 groundwater contamination.

## Surface Water Advisory

Chlorothalonil 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 overlaying extremely shallow ground water, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Notify state and/or Federal authorities and Sipcarn Agro USA, Inc. immediately if you observe any adverse environmental effects due to use of this product.

The pesticide label also includes other important information, including directions for use.

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

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

**SARA 311/312 - Hazard Categories:** See SECTION 2 - HAZARDS IDENTIFICATION

## SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Chlorothalonil	1897-45-6	~ 44

## 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	~ 44	Cancer

## SECTION 16: OTHER INFORMATION

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

**Date of preparation:** December 1, 2021

**Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:**

### Hazard Statement(s)

- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H319: Causes serious eye irritation.
- H330: Fatal if inhaled.





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- H331: Toxic if inhaled.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Sipcam Agro USA, Inc. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Sipcam Agro USA, Inc. accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.