



Safety Data Sheet (SDS)

Issue Date: 24-Jan-2022

Revision Date: 24-Jan-2022

Version 1

1. IDENTIFICATION

Product identifier

Product Name

Soraduo A

Other means of identification

SDS #

ADAMA-Soraduo A-012422E

Registration Number(s)

34367 (*Pest Control Products Act*)

UN/ID No

UN3082

Recommended use of the chemical and restrictions on use

Recommended Use

Fungicide

Details of the supplier of the safety data sheet

Registrant

ADAMA Agricultural Solutions Canada Ltd.
300-191 Lombard Avenue
Winnipeg, Manitoba R3B 0X1
1-855-264-6262

Emergency telephone number

Emergency Telephone

For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact ProPharma Group:
1-877-250-9291

2. HAZARD IDENTIFICATION

This chemical is a product registered under the *Pest Control Products Act* (PCPA) of Canada and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-PCPA registered chemicals. Please see Section 15 for additional information. This product has been classified according to Canada's *Hazardous Product Regulations* (WHMIS 2015).

Appearance: Yellow liquid

Physical state: Liquid

Odor: n/a

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1B

Hazard Pictogram(s)



Signal Word

WARNING

Hazard statement(s)

Harmful if swallowed
Causes mild skin irritation
May cause an allergic skin reaction

Causes serious eye irritation
Very toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Keep out of reach of children
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response

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 water and soap
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do NOT induce vomiting
IN CASE OF FIRE: Use water spray, dry chemical, carbon dioxide, or alcohol resistant foam

Precautionary Statements - Storage

Store locked up
Keep containers tightly closed in a dry, cool and well-ventilated place
Keep/store only in original container and out of direct sunlight
Keep away from heat, sparks, flame and other sources of ignition

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight %
Prothioconazole	178928-70-6	20 - 26%
Acetophenone	98-86-2	>1%

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES**Description of first aid measures**

General Advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek medical advice.
Skin Contact	In case of contact, immediately wash skin with soap and water or water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical attention for further treatment.

Ingestion	Rinse mouth. Drink plenty of water. Call a physician or poison control centre immediately.
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Self-Protection of the First Aider	Use personal protective equipment as required.
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Most important symptoms and effects, both acute and delayed

Symptoms	None known.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media	Not determined.
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Specific Hazards Arising from the Chemical

Combustible material

Hazardous combustion products	Smoke, fumes or vapors, and oxides of carbon.
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Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
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Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12, ECOLOGICAL INFORMATION. See Section 13: DISPOSAL CONSIDERATIONS.
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Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material.
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Methods for Clean-Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Transfer contaminated absorbent, soil, and other materials to containers for disposal. For waste disposal, see section 13 of the SDS.
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7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on Safe Handling	Use personal protective equipment as required. Keep away from heat, sparks, flame and other sources of ignition (i.e. pilot lights, electric motors and static electricity). Use only
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with adequate ventilation. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Open and handle container with care.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Protection from freezing is recommended. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Keep/store only in original container and out of direct sunlight. Do not use food or drink containers for mixing or storage. Keep away from heat, sparks and open flame. Keep away from food, drink, seeds and animal feeding stuffs.
Incompatible Materials	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetophenone	TWA: 10 ppm	Not Established	Not Established

Appropriate engineering controls

Engineering Controls	Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	Use splash goggles or face shield when contact may occur.
Skin and Body Protection	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long-sleeved shirt, long pants, socks and shoes are suggested as the minimum work clothes requirement.
Respiratory Protection	Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke while using this product. Promptly remove all contaminated clothing and wash it before reuse. Wash or discard contaminated clothing. Discard contaminated leather items. Wash face, hands and any exposed skin area thoroughly after handling. Discard clothing and other absorbent materials that have been soaked or heavily contaminated with this product's concentrate. Do not reuse them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If there are no such instructions for washable products, use detergent and hot water. Keep and wash PPE separately from other clothing.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	no information available
Appearance	Yellow Liquid	Odor Threshold	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.5 – 7.5 (1% aqueous solution)	
Melting Point/Freezing Point	Not applicable	
Boiling Point/Boiling Range	No data available	
Flash Point	94.4°C	Pensky-Martens Closed Cup
Evaporation Rate	Not applicable	
Flammability (Solid, Gas)	Liquid - Not applicable	
Flammability Limits in Air	No data available	
Upper Flammability Limits		
Lower Flammability Limit		
Vapor Pressure	No data available	
Vapor Density	No data available	
Relative Density	1.03 – 1.13 g/mL	
Water Solubility	Product is emulsifiable	
Solubility in other solvents	No data available	
Partition Coefficient	See Section 12 for more information	
Auto-ignition Temperature	No data available	
Decomposition Temperature	No data available	
Kinematic Viscosity	26 mm ² /s 40°C	
Dynamic Viscosity	No data available	
Explosive Properties	Not an explosive	
Oxidizing Properties	Not oxidizing	

Other information

n/a

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Heat, flames and sparks. Extreme temperatures and direct sunlight. Exposure to air or moisture over prolonged periods. Refer to Section 7

Incompatible materials

None known.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not ingest.

Component Information

Chemical name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Prothioconazole	1030 mg/Kg (Rat)	>2000 mg/Kg (Rat)	5.02 mg/L 4h (Rat)
Acetophenone	2081 mg/Kg (Rat)	3300 mg/Kg (Rat)	1200 mg/L 4h (Mouse)

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity Not classified

Numerical measures of toxicity

Acute Inhalation LC₅₀ (Rat): 5.02 mg/L (4-hr)

Acute Oral LD₅₀ (Rat): 1030 mg/Kg

Acute Dermal LD₅₀ (Rat): >2000 mg/Kg

Eye Irritation: Irritating to eyes

Dermal Irritation: Mild skin irritant

Dermal Sensitization: Skin sensitizer

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects. This pesticide is toxic to estuarine and marine invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Chemical Name	Algae/aquatic plants	Avian	Fish	Crustacea
Prothioconazole	72 h EC ₅₀ : <i>Raphidocelis subcapitata</i> (green algae) 2.18 mg/L	Oral LD ₅₀ : <i>Colinus virginianus</i> (bobwhite quail) >2000 mg/Kg	96 h LC ₅₀ : <i>Oncorhynchus mykiss</i> (rainbow trout) 1.83 mg/L	48 h EC ₅₀ : <i>Daphnia magna</i> (water flea) 1.3 mg/L
Acetophenone	NA	NA	96 h LC ₅₀ : <i>Brachydanio rerio</i> : (Zebrafish) 155 mg/L	48 h EC ₅₀ : <i>Daphnia magna</i> 162 mg/L

Persistence/Degradability

Water DT₅₀ days: 0.8 – 1.0

Soil DT 50 days: 2.8

Bioaccumulation

(In octanol/water) Partition Coefficient Log P_{ow}: 3.04

Bioconcentration Factor (BCF): 19.7

Mobility

Chemical name	Partition coefficient
Prothioconazole	No data available

Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected.

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Do not contaminate water, food, or feed by storage or disposal. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Contaminated Packaging

Do not reuse this container for any purpose. This is a recyclable container and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14. TRANSPORT INFORMATION

Note

The transport classification(s) and information provided in this section are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by mode of transportation, container volume and package sizes. The transportation of materials and related activities are subject to all applicable laws, rules and requirements of regional and/or country regulations. Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s. (*Prothioconazole*)
Hazard class 9
Packing Group III
Marine Pollutant Yes
 <119 Gal (450 Liters): Not regulated when transported on land by motor vehicle or rail car in non-bulk containers.
 ≥119 Gal (450 Liters): REGULATED

IATA

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s. (*Prothioconazole*)
Transport hazard class(es) 9
Packing Group III
Marine Pollutant Yes

IMDG

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s. (*Prothioconazole*)
Transport hazard class(es) 9
Packing Group III
Marine Pollutant Yes

TDG

UN/ID No UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s. (*Prothioconazole*)
Hazard class 9
Packing Group III
Marine Pollutant Yes
 Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by road or railway vehicle.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Acetophenone	X	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetophenone	5000 lb	-	RQ 5000 lb final RQ RQ 2270kg final RQ

SARA 313

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Acetophenone	98-86-2	>1	1.0

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Acetophenone	X	X	X	X	X

CANADIAN REGULATIONS

There are Canada-specific environmental requirements for handling, use and disposal of this pest control product that are indicated on the product label.

Hazardous Products Regulations Information:

This product has been classified in accordance with the amended *Hazardous Products Act* (HPA) and the Hazard Criteria of the *Hazardous Products Regulations* (HPR), and the SDS contains all the information required by the HPR.

Hazardous Products Act Information:

Pest control products, as defined in subsection 2(1) of the *Pest Control Products Act* (PCPA), are excluded from the application of the *Hazardous Products Act* (that is, pest control products are exempt from the supplier labelling and SDS requirements of the *Hazardous Products Act and Regulations*). This product is exempt under WHMIS 2015 but has voluntarily been classified according to the WHMIS 2015 standard.

Pest Control Products Act Registration Number: 34367

Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product.

Product Statement

This chemical is a pest control product registered and regulated by Health Canada's Pest Management Regulatory Agency (PMRA) and is subject to certain labelling requirements under the *Pest Control Products Act*. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets, and for workplace labels of non-PCPA registered chemicals. Read the approved label, authorized under the *Pest Control Products Act*, prior to using or handling the pest control product. The following is the hazard information required on the pest control product label:

PCPA Label Hazard Communications

CAUTION - POISON
HARMFUL IF SWALLOWED
EYE AND SKIN IRRITANT
POTENTIAL SKIN SENSITIZER
KEEP OUT OF REACH OF CHILDREN
READ THE LABEL BEFORE USING

May irritate eyes. Avoid contact with eyes. May irritate the skin. Avoid contact with skin. Potential skin sensitizer. Harmful if swallowed. Avoid contact with skin, eyes, and clothing.

Difference between SDS and Pest Control Products Act label

	PCPA	SDS
Signal Word	Caution - Poison	Warning
Serious Eye Damage/Eye Irritation	May irritate eyes	Causes serious eye irritation
Skin Corrosion/Irritation	May irritate the skin	Causes mild skin irritation, May cause an allergic skin reaction
Skin sensitization	N/A	May cause an allergic skin reaction

16. OTHER INFORMATION

NFPA

Health Hazards

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS

Health Hazards

Not determined

Flammability

Not determined

Physical hazards

Not determined

Personal Protection

See Section 8

HMIS/NFPA HAZARD INDEX

0 - Minimal

1 - Slight

2 - Moderate

3 - Serious

4 - Severe

GHS HAZARD INDEX

Category 1 - Most Severe

Category 5 - Least Severe

Issue Date:

24-Jan-2022

Revision Date:

24-Jan-2022

Revision Note:

New product

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet