

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture
 Product name. : THIDIAZURON 4 SC HERBICIDE
 Other means of identification : EPA Reg. No. 66330-334

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

Use of the substance/mixture : Herbicide

1.3. Details of the supplier of the safety data sheet

Arysta LifeScience North America LLC
 15401 Weston Parkway, Suite 150
 Cary, NC 27513 - USA

1.4. Emergency telephone number

Emergency number : Exposure Calls (PROSAR): +1-866-303-6952 or +1-651-603-3432 (international)
 Spill Calls (CHEMTREC) (Contract # CCN1779): +1-800-424-9300 or +1-703-527-3887

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GHS-US classification**

Aquatic Chronic 2 H411
 Full text of H-phrases: see section 16

2.2. Label elements**GHS-US labelling**

Hazard pictograms (GHS-US) :



GHS09

Hazard statements (GHS-US) : H411 - Toxic to aquatic life with long lasting effects
 Precautionary statements (GHS-US) : P273 - Avoid release to the environment
 P391 - Collect spillage
 P501 - Dispose of contents/container in accordance with local and national regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

2.29 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Oral).
 2.38 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal).
 2.38 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)).

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Thidiazuron (Main constituent)	(CAS No) 51707-55-2	42.7	Aquatic Chronic 2, H411
Anionic/nonionic surfactant blend	(CAS No) trade secret	2.4	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of soap and water.
First-aid measures after eye contact	: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No particular fire or explosion hazard.
Reactivity	: No dangerous reactions known.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Protective equipment	: Chemical goggles or safety glasses. Wear suitable gloves resistant to chemical penetration.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Chemical goggles or safety glasses. Wear water-proof gloves.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Prevent dispersion.

6.3. Methods and material for containment and cleaning up

For containment	: Absorb and/or contain spill with inert material, then place in suitable container.
Methods for cleaning up	: Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin, eyes and clothing.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Do not store near food, foodstuffs, drugs, or potable water supplies. Keep container tightly closed.
Incompatible products	: Strong oxidizing agents.
Incompatible materials	: Direct sunlight.

7.3. Specific end use(s)

Herbicide.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Thidiazuron (51707-55-2)	
ACGIH	Not applicable
OSHA	Not applicable

Anionic/nonionic surfactant blend (trade secret)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls	: Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required.
Hand protection	: Wear water impervious gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.
Other information	: Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Viscous liquid.
Colour	: Off-white
Odour	: No data available
Odour threshold	: No data available
pH	: 5.5 - 7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 93 °C
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.186 g/ml
Solubility	: Water: Solubility in water of component(s) of the mixture : • Thidiazuron: 31 mg/l
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 800 - 1600 cP
Explosive properties	: No data available
Oxidising properties	: Exothermic reaction with Potassium Permanganate
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

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10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Nitrogen oxides. sulfur oxides. Burning produces irritating, toxic and noxious fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

THIDIAZURON 4 SC HERBICIDE	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 2.33 mg/l/4h

Thidiazuron (51707-55-2)	
LD50 oral rat	> 4000 mg/kg
LD50 dermal rat	> 1000 mg/kg
LD50 dermal rabbit	> 4000 mg/kg
LC50 inhalation rat (mg/l)	> 2.3 mg/l/4h

Skin corrosion/irritation : Not classified (Non-irritating to skin in rabbits.)
Serious eye damage/irritation : Not classified (Minimally irritating)
Respiratory or skin sensitisation : Not classified (No sensitizing reaction was observed for guinea pigs.)
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified (THIDIAZURON TECHNICAL NOAEL = 25 mg/kg/day)
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.
Likely routes of exposure : Skin and eyes contact.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Thidiazuron (51707-55-2)	
LC50 fishes 1	> 19 mg/l 96 h Rainbow trout
EC50 Daphnia 1	> 10 mg/l 48 h
LC50 fish 2	> 32 mg/l 96 h Bluegill sunfish

12.2. Persistence and degradability

THIDIAZURON 4 SC HERBICIDE	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Thidiazuron (51707-55-2)	
Log Kow	1.77

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

- Effect on ozone layer : No known ecological damage caused by this product.
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Disposal via incineration is recommended.
Ecology - waste materials : Dispose of container in a licensed facility.

SECTION 14: Transport information

In accordance with DOT

Not considered a dangerous good for transport regulations

Additional information

- Other information : No supplementary information available.

ADR

- Transport document description : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Thidiazuron), 9, III, (E)
Packing group (ADR) : III
Class (ADR) : 9 - Miscellaneous dangerous substances and articles
Hazard identification number (Kemler No.) : 90
Classification code (ADR) : M6
Danger labels (ADR) : 9 - Miscellaneous dangerous compounds



Orange plates :



- Tunnel restriction code (ADR) : E
LQ : 5L
Excepted quantities (ADR) : E1

Transport by sea

- UN-No. (IMDG) : 3082
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Thidiazuron)
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG) : III - substances presenting low danger
Marine Pollutant : Yes



Air transport

- UN-No. (IATA) : 3082
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Thidiazuron)
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III - Minor Danger

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SECTION 15: Regulatory information

15.1. US Federal regulations

Thidiazuron (51707-55-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

THIDIAZURON 4 SC HERBICIDE

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

Thidiazuron (51707-55-2)

Not listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

Thidiazuron (51707-55-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R20/21

R52/53

15.2.2. National regulations

Thidiazuron (51707-55-2)

Not listed on the Canadian Non-Domestic Substances List (NDSL).

15.3. US State regulations

Not listed

15.4. US EPA - FIFRA Regulations

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

Signal word (FIFRA)	: CAUTION.
Hazard statements (FIFRA)	: Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. Do not contaminate food or feedstuffs.
Environmental hazards	: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from treated areas. This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to product runoff that contains this product. A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination. This chemical has properties and characteristics associated with chemicals detected in ground water. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.
Physical or Chemical hazards	: This product is incompatible with strong oxidizing agents such as nitrates, chlorine bleach or hydrogen peroxide.

SECTION 16: Other information

Indication of changes : Original Document.

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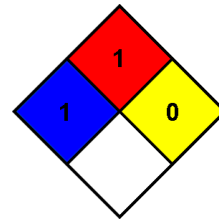
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- Data sources : European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
OSHA 29CFR 1910.1200 Hazard Communication Standard.
TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.
- Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists).
ATE: Acute Toxicity Estimate.
CAS (Chemical Abstracts Service) number.
CLP: Classification, Labelling, Packaging.
EC50: Environmental Concentration associated with a response by 50% of the test population.
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
LD50: Lethal Dose for 50% of the test population.
OSHA: Occupational Safety & Health Administration.
TSCA: Toxic Substances Control Act.
- Other information : None.

Full text of H-phrases:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	skin corrosion/irritation Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects

- NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
- NFPA fire hazard : 1 - Must be preheated before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS US (GHS HazCom 2012)

SDS Prepared by: The Redstone Group, LLC.
6397 Emerald Pkwy
Suite 200
Dublin, Ohio, USA 43016
614.923.7472
www.redstonegrp.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.