

Stalwart® Xtra Herbicide

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
Trade Names	Stalwart® Xtra Herbicide
CAS No.	Mixture
EPA Identification Number	EPA Reg. No. 60063-23

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

Identified Use(s)	Herbicide
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)	STOT RE 2
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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)

WARNING

Hazard Statement(s)

May cause damage to organs through prolonged or repeated exposure: Heart, Blood, Kidneys.

Precautionary Statement(s)

Do not breathe mist/vapours/spray.
Wash hands and exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Get medical advice/attention if you feel unwell.
Disposal should be in accordance with local, state or national legislation. Consult

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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: Atrazine and Metolachlor. 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)
Atrazine-1,3,5-Triazine-2,4-diamine, 6-chloro-N2-ethyl-N4-(1-methylethyl)-	~ 33	1912-24-9	Acute Tox. 4; H302 Skin Sens. 1; H317 STOT- RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Metolachlor	~ 26	51218-45-2	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Ethylene Glycol	1 - 5	107-21-1	Acute Tox. 4; H302 STOT- RE 2; H373

Additional Information – None

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is laboured, administer oxygen. Call a POISON CENTER/doctor if you feel unwell. 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.

Most important symptoms and effects, both acute and delayed

Contains: Atrazine and Metolachlor. May produce an allergic reaction in persons already sensitised.

Indication of any immediate medical attention and special treatment needed

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

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Stalwart® Xtra Herbicide

-Suitable Extinguishing Media

Non-flammable / Non-combustible. As appropriate for surrounding fire.

-Unsuitable Extinguishing Media

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. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Observe directions on label and instructions for use. See Also Section 15.

Conditions for safe storage, including any incompatibilities

-Storage temperature

Store at room temperature. Do not allow material to freeze.

-Incompatible materials

Strong oxidising agents. Substances that react with water.

Specific end use(s)

Herbicide

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)	
Atrazine	1912-24-9	-----	2 mg/m3 ⁽¹⁾	-----	-----	⁽¹⁾ Inhalable

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.	Light tan
Odour	Sweet
Odour Threshold (ppm)	Not available.
pH (Value)	6.37
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	Not available.
Flash Point (°C)	Non-flammable / Non-combustible
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)	1.117
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)	~429 @ 24 °C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Other information	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

No hazardous reactions known if used for its intended purpose.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions
Conditions to avoid
Incompatible materials
Hazardous decomposition product(s)

None anticipated.
Incompatible materials
Strong oxidising agents. Substances that react with water.
Combustion or thermal decomposition will evolve toxic and irritant vapours. Forms oxides of carbon and nitrogen, also chlorine and chlorinated compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Substances

Not applicable

Mixtures

Acute toxicity

Oral: LD50 >2000 mg/kg-bw (rat)
Dermal: LD50 >2000 mg/kg-bw (rat)
Inhalation: LC50 >2.04 mg/L (rat)

Skin corrosion/irritation
Serious eye damage/irritation
Respiratory or skin sensitization

Unlikely to cause skin irritation.
Unlikely to cause eye irritation.
It is not a skin sensitiser in animal tests.

Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Aspiration hazard

Not available.
Not available.
Not available.
Not available.
Not available.
Not available.

Substances in preparations / mixtures:

Metolachlor (CAS No. 51218-45-2):

Acute toxicity

Oral: LD50 >2000 mg/kg -bw
Dermal: LD50 >5000 mg/kg -bw
Inhalation: LC50 >2.08 mg/l (Aerosol), 4-hr. rat

Irritation/Corrosivity

Causes skin irritation. Causes serious eye irritation.

Sensitization

May cause an allergic skin reaction.

Repeated dose toxicity

No data

Carcinogenicity

No data

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

Mutagenicity

Not to be expected.

Reproductive toxicity

Not to be expected.

Atrazine (CAS No. 1912-24-9):

Acute toxicity

Oral LD50: 714 - >1869 mg/kg-bw (rat)
Dermal LD50: >2000 mg/kg-bw (rat)
Inhalation LC50: > 5.8 mg/L (4 hr) (rat)

Irritation/Corrosivity

Unlikely to cause skin irritation. Unlikely to cause eye irritation.

Sensitization

May cause an allergic skin reaction.

Repeated dose toxicity

May cause damage to organs through prolonged or repeated exposure: Oral, Heart, Blood

Carcinogenicity

Not to be expected.

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

Mutagenicity Not to be expected.
Reproductive toxicity Not to be expected.

Ethylene glycol (CAS# 107-21-1):

Acute toxicity Oral LD50: 7712 mg/kg-bw (rat)
Dermal LD50: >3500 mg/kg-bw (rat)
Inhalation LC50: > 2.5 mg/L (6 hr) (rat)

Irritation/Corrosivity Unlikely to cause skin irritation. Unlikely to cause eye irritation.
Sensitization It is not a skin sensitizer.

Repeated dose toxicity May cause damage to organs through prolonged or repeated exposure: Oral, kidney. NOAEL 150 mg/kg bw/day

Carcinogenicity Not to be expected.

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

Mutagenicity Not to be expected.
Reproductive toxicity Not to be expected.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Metolachlor (CAS No. 51218-45-2):

Short term EC50 (96 hour): 3.9 - 10 mg/L (Fish)
EC50 (48 hour): 25.1 mg/L (Daphnia magna)
EC50 (72 hour): <1 mg/L (aquatic plants), estimated.

Long Term NOEC (1 - 4 days): 0.038 mg/L (Duckweed)

Atrazine (CAS No. 1912-24-9):

Short term LC50 (96 hour): 4.5 - 11 mg/L(fish)
EC50 (48 hour): 0.7 – 8.1 mg/L (crustacea)
EC50 (72 hour): 0.043 mg/l (algae)

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

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

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

Additional Information None known.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT) *	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not classified as dangerous for transport. *	UN 3082	UN 3082
Proper Shipping Name		Environmentally hazardous substance, liquid, n.o.s. (Metolachlor & Atrazine)	
Transport hazard class(es)		9	9
Packing group		III	III
Hazard label(s)		Marine Pollutant	Marine Pollutant
Environmental hazards		Yes	Yes
Special precautions for user		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. (Metolachlor & Atrazine), 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:

CAUTION: Harmful if swallowed, inhaled, or absorbed through skin. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, or clothing. Causes moderate eye irritation. Prolonged or frequently skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or viton.

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

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or viton
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear (if overhead exposure), and
- A chemical-resistant apron, when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.

See Engineering Controls for additional requirements.

Engineering Controls:

Mixers and loaders supporting aerial applications must use a closed system that meets the requirements for dermal protection listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4)] and must:

- Wear the long-sleeved shirt and long pants, chemical resistant gloves made of waterproof materials, shoes and socks,
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: coveralls, chemical resistant footwear, and chemical resistant apron.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240 (d)(6)]. Pilots must wear the PPE required on this labeling for applicators, however, they need not wear chemical-resistant gloves when using an enclosed cockpit.



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Flaggers supporting aerial applications must use an enclosed cab that meets the definition on the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240 (d)(5)] for dermal protection. In addition, flaggers must:

- Wear the PPE required on this labeling for flaggers.
- Be provided, have immediately available, and use in an emergency when they must exit the cab in the treated area: Coveralls, chemical resistant gloves made of waterproof materials, chemical resistant footwear, and chemical resistant headgear (if overhead exposure);
- Take off any PPE that was worn in the treated area before reentering the cab;
- Store all such PPE in a chemical resistant container, such as a plastic bag, to prevent contamination of the cab.

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Environmental Hazards:

This pesticide contains atrazine, which is toxic to aquatic 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. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water and rinsate.

Ground Water Advisory

Stalwart Xtra contains both the active ingredients atrazine and metolachlor.

Atrazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

Metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying 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.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates. Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

This product must not be mixed or loaded, or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading sites.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product must not be applied aerially or by ground within 66 ft. of points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

One of the following restrictions must be used in applying atrazine to tile-outletted terraced fields containing standpipes:

- DO NOT apply this product within 66 feet of standpipes in tile outletted terraced fields.
- Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
- Apply this product to the entire tile outletted terraced field under a no till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

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



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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.
None	----	-----

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
Atrazine	1912-24-9	~ 33	Developmental, female

SECTION 16: OTHER INFORMATION

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

Date of preparation: December 14, 2021

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

Hazard Statement(s)

- H302: Harmful if swallowed.
- H317: May cause an allergic skin reaction.
- H373: May cause damage to organs through prolonged or repeated exposure.
- 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. Sipcama 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. Sipcama 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.