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Revision Number 1

1. Identification

Product identifier

Product Name MesoXtra Herbicide

Other means of identification

Product Code(s) 94730-48

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product label

Details of the supplier of the safety data sheet

Manufacturer Address

Generic Crop Science, LLC
1887 Whitney Mesa Drive #9740
Henderson, NV 89014-2069
1-844-200-FARM (3276)

E-mail regulatory@genericcropscience.com

Emergency telephone number

Emergency telephone CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)
24/7 Health Emergencies: Call 800-858-7378 (National Pesticide Information Center)

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin sensitization	Category 1
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements

Warning

Hazard statements

May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statements - Prevention**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/clothing and eye/face protection.
 Contaminated work clothing must not be allowed out of the workplace.
 Do not breathe vapor or mist.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of water and soap.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other information

May be harmful if swallowed. May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
Metolachlor	51218-45-2	10 - 20	*
Atrazine	1912-24-9	10 - 20	*
Mesotrione	104206-82-8	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation

or allergic reactions see a physician.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media None known based on information supplied.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO_x). Sulfur oxides.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other noncombustible absorbent material. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep in properly labeled containers. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Atrazine 1912-24-9	TWA: 2 mg/m ³ inhalable particulate matter	(vacated) TWA: 5 mg/m ³	TWA: 5 mg/m ³

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Opaque liquid
Physical state Liquid
Color Off-white
Odor Mild
Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	3.32	solution (1 %)
pH (as aqueous solution)		No data available
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	> 100 °C / > 212 °F	Seta Closed Cup
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available

Lower flammability or explosive limits		No data available
Vapor pressure	~17 mmHg	@ 20 °C
Vapor density		No data available
Relative density	1.07 g/cm ³	
Water solubility	Dispersible	
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Other information		
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	
Softening point	No information available	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
Skin contact	May be harmful in contact with skin. Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity

Oral LD50 > 2,000 mg/kg
Dermal LD50 > 2,000 mg/kg
Inhalation LC50 > 5.12 mg/l (rat, 4 hr)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Metolachlor 51218-45-2	> 2000 mg/kg (Rat)	= 12700 mg/kg (Rabbit)	> 3.20 mg/L (Rat) 4 h
Atrazine 1912-24-9	= 672 mg/kg (Rat)	> 5000 mg/kg (Rat)	= 5200 mg/m ³ (Rat) 4 h
Mesotrione 104206-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

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

Skin corrosion/irritation No information available.
Serious eye damage/eye irritation No information available.
Respiratory or skin sensitization May cause an allergic skin reaction.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Atrazine 1912-24-9	A3	Group 3	-	-

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.
STOT - single exposure No information available.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target organ effects Liver. Respiratory system. Eyes. Skin. Central nervous system.
Aspiration hazard No information available.
Other adverse effects No information available.
Interactive effects No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea

Metolachlor 51218-45-2	EC50: =57.1mg/L (72h, Desmodosmus subspicatus) EC50: 0.0448 - 0.0568mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 8.6 - 12mg/L (96h, Lepomis macrochirus) LC50: 3.3 - 4.6mg/L (96h, Oncorhynchus mykiss) LC50: 5.4 - 12mg/L (96h, Pimephales promelas) LC50: 7.4 - 10.5mg/L (96h, Poecilia reticulata)	-	LC50: =25.1mg/L (48h, Daphnia magna) EC50: =4.25mg/L (48h, Daphnia magna) EC50: 13 - 18.4mg/L (48h, Daphnia magna)
Atrazine 1912-24-9	EC50: =0.03mg/L (72h, Desmodosmus subspicatus) EC50: 0.014 - 0.027mg/L (96h, Desmodosmus subspicatus) EC50: =0.072mg/L (72h, Desmodosmus subspicatus) EC50: =0.13mg/L (96h, Pseudokirchneriella subcapitata) EC50: =0.2mg/L (72h, Pseudokirchneriella subcapitata) EC50: =0.004mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.0096 - 0.07mg/L (72h, Pseudokirchneriella subcapitata) EC50: =0.0929mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 4.5 - 11mg/L (96h, Oncorhynchus mykiss) LC50: 3 - 6.75mg/L (96h, Oncorhynchus mykiss) LC50: =16mg/L (96h, Lepomis macrochirus) LC50: >8mg/L (96h, Lepomis macrochirus) LC50: =23.999mg/L (96h, Lepomis macrochirus) LC50: =19mg/L (96h, Cyprinus carpio) LC50: 15.7 - 20.2mg/L (96h, Cyprinus carpio) LC50: 5.4 - 8.4mg/L (96h, Lepomis macrochirus) LC50: >4.1mg/L (96h, Pimephales promelas) LC50: =4.3mg/L (96h, Poecilia reticulata)	-	EC50: 5.2 - 8.1mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Metolachlor 51218-45-2	2.9
Atrazine 1912-24-9	2.59

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT	Not regulated
IATA	Not regulated in quantities less than 5 liter per individual container. See IATA SP A197
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
IATA Technical Name	Atrazine, Mesotrione
Special Provisions	A97, A158, A197
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine, Mesotrione), 9, III
ERG Code	9L
IMDG	Not regulated in quantities less than 5 liter per individual container. See IMDG 2.10.2.7
UN number or ID number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Marine pollutant	P
Marine pollutant	Atrazine, Mesotrione
Special Provisions	274, 335, 969
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Atrazine, Mesotrione), 9, III, Marine pollutant

15. Regulatory information

International Inventories

Contact supplier for inventory compliance status

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Atrazine - 1912-24-9	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Atrazine - 1912-24-9	Developmental Female Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Metolachlor 51218-45-2	X	-	-
Atrazine 1912-24-9	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 94730-48

16. Other information

NFPA	Health hazards 2	Flammability 1	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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Revision Note

Initial Release.

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