



Please read the entire document. This Material Safety Data Sheet contains important environmental, health and toxicology information for your employees, and anyone who will use, transport, store, dispose of or handle this product. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information contained herein must be incorporated in your MSDS.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: XONERATE™ Herbicide
EPA REGISTRATION NUMBER(S): 66330-46
SYNONYM(S): TM-45201

Table with 1 column: COMPANY. Content: Arysta LifeScience North America, LLC, 15401 Weston Parkway, Suite 150, Cary, NC 27513

Table with 2 columns: EMERGENCY TELEPHONE NUMBERS. Content: HEALTH EMERGENCY: 1-866-303-6952, or 1-651-632-8946; SPILL EMERGENCY: 1-800-424-9300, or 1-703-527-3887

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Table with 5 columns: Active Ingredient(s)/Hazardous Inert Ingredient(s), CAS #, Exposure Limits, % Weight, % Volume. Row 1: Amicarbazone, 129909-90-6, TWA (OSHA PEL, ACGIH TLV, NIOSH REL all None), 70, NA

Only the identities of the active ingredient(s) and any hazardous inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

*Source: Guide to Occupational Exposure Values 2008, published by ACGIH

aTWA: Time-weighted average exposure concentration for a conventional 8-hour (TLV, PEL) or up to a 10-hour (REL) workday and a 40-hour workweek.

bOSHA PEL: Occupational Safety and Health Administration Permissible Exposure Limits.

cACGIH TLV: American Conference of Governmental Industrial Hygienists, Inc., Threshold Limit Values.

dNIOSH REL: National Institute for Occupational Safety and Health Recommended Exposure Limits.

SECTION 3: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

CAUTION:

- HARMFUL IF SWALLOWED
- CAUSES MODERATE EYE IRRITATION
- AVOID CONTACT WITH EYES AND CLOTHING
- KEEP OUT OF REACH OF CHILDREN

Acute Health Hazards

Eye: May cause moderate irritation. The degree of the injury will depend on the amount and duration of the contact and the speed and thoroughness of the first aid treatment. Adverse effects resulting from an exposure may include temporary redness, swelling and pain.

Skin: A single, prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

Ingestion: Harmful if swallowed. Ingestion of this product may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Inhalation: Exposure to very high concentrations may result in respiratory irritation. Signs and symptoms may include nasal discharge, sore throat, coughing, and difficult breathing.

Chronic Health Hazards (Including Cancer): Amicarbazone Technical is not carcinogenic.

Teratology (Birth Defects) Information: Amicarbazone Technical is not teratogenic and it is not a reproductive toxicant.

Mutagenicity: Amicarbazone Technical is not mutagenic.

SECTION 4: FIRST AID MEASURES

Ingestion: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eyes: Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation: Move person to fresh air. If person is not breathing, call 9-1-1 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: No specific antidote is available. Treat the patient symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Limits in Air (% by volume):		
	Upper:	NDA
	Lower:	NDA
Flash Point:		
	Method Used:	NA
Autoignition Temperature:		
LEL/UEL:		
NFPA Hazard Classification:		
	Health:	1
	Flammability:	1
	Reactivity:	0
	Other:	NDA
Extinguishing Media:		
Sprayed water jet, foam, extinguishing powder, CO ₂ , sand		
Special Fire Fighting Procedures:		
Fight fire in early stages if safe to do so. Wear respiratory protection. In well-ventilated areas: full-face mask with combination filter, e.g. ABEK-P2 (offers no protection from carbon monoxide). In enclosed premises: respirator with independent air supply. Contain firefighting water.		
Unusual Fire/Explosion Hazards:		
NDA		
Hazardous Combustion Products:		
In the event of fire, the formation of hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.		

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PHONE NUMBERS

Exposure Calls (PROSAR): 1-866-303-6952 or 1-651-632-8946 (International)

Spill Calls (CHEMTREC): 1-800-424-9300 or 1-703-527-3887

Do not allow entry into drains or waterways. Take up spilled product with dust-binding material or suitable vacuum cleaner. Avoid formation of dust. Place collected spilled product and binding material into suitable closable container. Clean floor and other objects with a damp cloth. Place used cleaning materials into closable receptacles.

SECTION 7: HANDLING AND STORAGE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read entire label. Use strictly in accordance with label precautionary statements and directions. Read and observe all precautions on product label. Suitable container materials are LDPE (low-density polyethylene). When using open containers, use local exhaust ventilation to prevent dusts from spreading. Make provision for product and fire-fighting water to be retained. Take precautions to prevent formation of explosive mixtures. Keep away from sources of ignition. No smoking. Keep container tightly closed. Prevent formation of dust deposits and whirling-up of dust. For reasons of quality assurance, keep dry at temperatures under 40°C. Store so that unauthorized persons do not have access. Keep away from food, drink, and animal feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (category A) made of materials such as butyl rubber ≥14 mils, natural rubber ≥14 mils, neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige
Odor:	Slight characteristic smell
Physical State:	Solid, powder
pH:	NDA
Boiling Point:	NDA
Melting Point:	NDA
Freezing Point:	NDA
Vapor Pressure	NDA
Vapor Density:	NDA
Bulk Density:	NDA
Specific Gravity:	NDA
Evaporation Rate:	NDA
Solubility in Water:	NDA
Percent Solids by Weight:	NDA
Percent Volatile:	NDA
Volatile Organic Compounds (VOC):	NDA
Molecular Weight:	NDA
Viscosity:	NDA

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	This is a stable material
Hazardous Polymerization:	Will not occur
Flash Point:	NA
Flammable Point:	NDA
Auto Ignition:	NDA
Incompatibility With Other Materials:	NDA
Hazardous Decomposition Products:	In fire conditions the formation of hydrogen cyanide, carbon monoxide, and nitrogen oxides must be anticipated.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute:

Eye Irritation: Moderate irritant (rabbit)

Skin Irritation: Non-irritant (rabbit)

Skin Sensitization: Not a contact sensitizer by the Buehler Method.

Dermal Toxicity: LD₅₀ (rat): > 5,000 mg/kg.

Oral Toxicity: LD₅₀ (rat): > 2,000 mg/kg (males) and 1,105 mg/kg (females).

Inhalation Toxicity: 4-hr dust LC₅₀ (rat): > 2,000 mg/m³ (2.0 mg/L) (no deaths).

Chronic/Carcinogenicity: NOEL = 1.6 mg/kg/day (based on liver effects in dogs).

Teratology/Developmental Toxicity: NOEL = 20 mg/kg/day

Mutagenicity: No evidence of mutagenicity.

Reproductive Toxicity: NOEL = 100 ppm.

SECTION 12: ECOLOGICAL INFORMATION

Avian Toxicity (based upon technical material):

Northern bobwhite (<i>C. virginianus</i>)	Oral LD ₅₀ > 2,000 mg/kg
Northern bobwhite (<i>C. virginianus</i>)	Diet LC ₅₀ > 10,000 ppm
Mallard duck (<i>A. platyrhinchus</i>)	Diet LC ₅₀ > 10,536 ppm

Aquatic Organism Toxicity (based upon technical material):

Bluegill (<i>L. macrochirus</i>)	96 hr LC ₅₀ > 120 mg/L
Rainbow Trout (<i>O. mykiss</i>)	96 hr LC ₅₀ > 128 mg/L
Waterflea (<i>D. magna</i>)	48 hr EC ₅₀ = 40.8 mg/L

Other Non-Target Organism Toxicity (based upon technical material):

Honeybee (<i>A. mellifera</i> L.)	48 hr contact LD ₅₀ > 200 µg/b
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SECTION 13: DISPOSAL CONSIDERATIONS

End users must dispose of any unused product as per the label recommendations and in accordance with all applicable laws and regulations. Check governmental regulations and local authorities for approved disposal of this material.

SECTION 14: TRANSPORT INFORMATION

Only regulated when shipped by water or air or in bulk package. Describe as: UN3077, Environmentally hazardous substances, solid, n.o.s. (Amicarbazone), 9, III, Marine Pollutant.

SECTION 15: REGULATORY INFORMATION

U.S Federal Regulations

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act): All pesticides are governed under FIFRA. Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

CERCLA (Comprehensive Response Compensation, and Liability Act): NA

EPCRA (Emergency Planning and Community Right-to-Know Act) Section 313: NA

OSHA (Occupational Safety and Health Administration): This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

RCRA (Resource Conservation and Recovery Act): NDA

SARA Title III (SUPERFUND Amendments and Reauthorization Act):

Section 302 (EHS) TPQ: NONE

Section 304 (EHS) RQ: NONE

Section 311/312 CATEGORIES

1. Immediate (Acute) Health Effects; **YES**
2. Delayed (Chronic) Health Effect; **NO**
3. Fire Hazard; **NO**
4. Sudden Release of Pressure Hazard; **NO**
5. Reactivity Hazard; **NO**

TSCA (Toxic Substance Control Act): This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

State Regulations: Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

SECTION 16: OTHER INFORMATION

Reason for issue:	Changes to Transportation Information (Section 14)
Prepared by:	Ashley R. Brown
Issue date:	07/20/12
Supersedes date:	01/27/12
MSDS number:	00516

The information in this MSDS is based on data available to us as of the issue date given herein, and believed to be correct. Contact Arysta LifeScience North America LLC at (919) 678-4900 to determine if additional data and information have become available since the issue date.

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