SAFETY DATA SHEET
Xonerate 2 SC Herbicide

SDS #: FO004123-A
Revision date: 2017-01-27
Format: NA
Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name Xonerate 2 SC Herbicide
Other means of identification
Product Code(s) FO004123-A
Synonyms AMICARBAZONE:
4-amino-N-tert-butyl-4,5-dihydro-3-isopropyl-5-oxo-1H-1,2,4-triazole-1-carboxamide (IUPAC name);
4-amino-N-(1,1-dimethylethyl)-4,5-dihydro-3-(1-methylethyl)-5-oxo-1H-1,2,4-triazole-1-carboxamide (CAS name), Xanthan Gum
Active Ingredient(s) Amicarbazone

Recommended use of the chemical and restrictions on use
Recommended Use: Herbicide
Restrictions on Use: Use as recommended by the label
Supplier Address FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number
For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

Medical Emergencies:
1 800 / 331-3148 (PROSAR - U.S.A. & Canada)
1 651 / 632-6793 (PROSAR - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2B</td>
</tr>
</tbody>
</table>
GHS Label elements, including precautionary statements

**Warning**

**Hazard Statements**
H302 - Harmful if swallowed
H320 - Causes eye irritation

**Precautionary Statements - Prevention**
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
P362 - Take off contaminated clothing and wash before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

**Hazards not otherwise classified (HNOC)**
No hazards not otherwise classified were identified.

**Other Information**
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amicarbazone</td>
<td>129909-90-6</td>
<td>23.25</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>1-10</td>
</tr>
</tbody>
</table>

Synonyms are provided in Section 1.

### 4. FIRST AID MEASURES

**Eye Contact**
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

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

**Inhalation**
Move to fresh air. If person is not breathing, call 911 (within the U.S. and Canada) or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**Ingestion**
Call a 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 a poison control center or doctor.
control center or doctor. Do not give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

None known.

### Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the safety data sheet, product container and/or product label with you when calling a poison control center or doctor or going for treatment.

### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

Dry chemical, CO2, sand, earth, water spray or regular foam.

#### Specific Hazards Arising from the Chemical

None known

#### Hazardous Combustion Products

In the event of a fire, the formation of hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.

#### Explosion data

- Sensitivity to Mechanical Impact: No information available.
- Sensitivity to Static Discharge: No information available.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear. Prevent runoff from fire control from entering streams, sewers, or drinking water supply.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions

Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

#### Other

For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

#### Environmental Precautions

Keep people and animals away from and upwind of spill/leak. Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information.

#### Methods for Containment

Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

#### Methods for cleaning up

Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

### 7. HANDLING AND STORAGE

#### Handling

Handle in accordance with good industrial hygiene and safety practice. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

#### Storage

Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Keep/store only in original container.

#### Incompatible products

No information available

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

| Chemical name | British Columbia | Quebec | Ontario TWAEV | Alberta |
### Appropriate engineering controls

**Engineering measures**

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**

For dust, splash, mist or spray exposure, wear chemical protective goggles.

**Skin and Body Protection**

Minimize skin contamination by following good industrial hygiene practices.

**Hand Protection**

Wear chemical protective gloves made of materials such as nitrile or neoprene.

**Respiratory Protection**

For dust, splash, mist or spray exposures wear a filtering mask.

**Hygiene measures**

Clean water should be available for washing in case of eye or skin contamination. Remove and wash contaminated clothing before re-use. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Launder work clothing separately from regular household laundry.

**General information**

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Suspension</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Off-white / brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Paint-like</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 - 7.5</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>1500 - 2500 cps</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Xonerate 2 SC Herbicide

Molecular weight
No information available

Bulk density
8.75 lb/gal

10. STABILITY AND REACTIVITY

Reactivity
Not applicable

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
None known

Incompatible materials
No information available.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral
> 1105 mg/kg (rat)

LD50 Dermal
> 5000 mg/kg (rat)

LC50 Inhalation
> 2.0 mg/L 4 hr, No deaths occurred at this concentration.

Serious eye damage/eye irritation
Mildly irritating (rabbit).

Skin corrosion/irritation
Non-irritating during normal use (rabbit).

Sensitization
Not a contact sensitizer.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol (57-55-6)</td>
<td>= 20 g/kg (rat)</td>
<td>= 20800 mg/kg (rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
In subchronic and chronic toxicity studies the major effects in mammals are general toxicity, as evidenced by decreased body weight and weight gain, and liver toxicity.

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

Mutagenicity
Amicarbazone: Not mutagenic

Carcinogenicity
Amicarbazone: Not carcinogenic

Neurological effects
Amicarbazone: Potential for neurotoxic effects

Reproductive toxicity
Amicarbazone: This product does not contain any known or suspected reproductive hazards.

Developmental toxicity
Amicarbazone: Not a reproductive hazard.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Neurological effects
Amicarbazone: Potential for neurotoxic effects

Aspiration hazard
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Amicarbazone (129909-90-6)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Ingredient(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>96 h LC50</td>
<td></td>
<td>Bluegill sunfish</td>
<td>&gt;120</td>
<td>mg/L</td>
</tr>
<tr>
<td>96 h LC50</td>
<td></td>
<td>Rainbow trout</td>
<td>&gt;128</td>
<td>mg/L</td>
</tr>
<tr>
<td>48 h EC50</td>
<td></td>
<td>Water flea</td>
<td>40.8</td>
<td>mg/L</td>
</tr>
</tbody>
</table>
Persistence and degradability  
Amicarbazone. Moderately persistent, Not readily biodegradable.

Bioaccumulation  
No information available.

Mobility  
Amicarbazone: Very mobile; has potential to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods  
Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated Packaging  
Containers must be disposed of in accordance with local regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT  
This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

TDG  
Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>Proper Shipping Name</th>
<th>Hazard class</th>
<th>Packing Group</th>
<th>Marine Pollutant</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3082</td>
<td>Environmentally hazardous substance, liquid, n.o.s.</td>
<td>9</td>
<td>III</td>
<td>Amicarbazone.</td>
<td>UN3082, Environmentally hazardous substance, liquid, n.o.s., (Amicarbazone) 9, III, Marine Pollutant</td>
</tr>
</tbody>
</table>

ICAO/IATA

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>Proper Shipping Name</th>
<th>Hazard class</th>
<th>Packing Group</th>
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<td>UN3082, Environmentally hazardous substance, liquid, n.o.s., (Amicarbazone) 9, III, Marine Pollutant</td>
</tr>
</tbody>
</table>

IMDG/IMO

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>Proper Shipping Name</th>
<th>Hazard class</th>
<th>Packing Group</th>
<th>Marine Pollutant</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3082</td>
<td>Environmentally hazardous substance, liquid, n.o.s.</td>
<td>9</td>
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<td>Amicarbazone.</td>
<td>UN3082, Environmentally hazardous substance, liquid, n.o.s., (Amicarbazone) 9, III, Marine Pollutant</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

U.S. 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:

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
</tbody>
</table>
Sudden release of pressure hazard: No

Reactive Hazard: No

**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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butanol 71-36-3</td>
<td>5000 lb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2270 kg</td>
<td></td>
</tr>
</tbody>
</table>

**FIFRA Information**
This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION
Keep out of the reach of children.

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol 57-55-6</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**International Inventories**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol 57-55-6</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Mexico - Grade**
Moderate risk, Grade 2

**WHMIS Statement**
This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**WHMIS Hazard Class**
See section 2 for more information
Xonerate 2 SC Herbicide

NFPA | Health Hazards 1 | Flammability 1 | Instability 0 | Special Hazards -
HMIS | Health Hazards 1 | Flammability 1 | Physical hazard 0 | Personal Protection X

Revision date: 2017-01-27
Reason for revision: Initial Release

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Prepared By:

FMC Corporation

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End of Safety Data Sheet