1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Authority® Maxx Herbicide

Other means of identification

Product Code(s) 6884-A

Synonyms SULFENTRAZONE (FMC 97285):
2’,4’-dichloro-5’-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)
methanesulfonanilide (IUPAC name);
N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-
1,2,4-triazol-1-yl]phenyl] methanesulfonamide (CAS name)

CHLORIMURON-ETHYL: ethyl
2-[[[(4-chloro-6-methoxypyrimidin-2-yl)amino]carbonyl]amino]-sulfonyl]benzoate

Active Ingredient(s) Sulfentrazone, Chlorimuron-ethyl

Chemical Family Triazolinones; Sulfonylurea

Alternate Commercial Name F9016-2 DF Herbicide

Recommended use of the chemical and restrictions on use.

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label

Manufacturer 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)
**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family**
Triazolinones; Sulfonylurea.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfentrazone</td>
<td>122836-35-5</td>
<td>61</td>
</tr>
<tr>
<td>Chlorimuron ethyl</td>
<td>90982-32-4</td>
<td>3.8</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>1.5</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 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. 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, contact emergency medical services, 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. Do not induce vomiting or give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed**
Central nervous system effects.

**Indication of immediate medical attention and special treatment needed, if necessary**
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

**Specific Hazards Arising from the Chemical**
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous Combustion Products**
Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.

**Explosion data**
Not sensitive.

**Sensitivity to Mechanical Impact**
Not sensitive.

**Sensitivity to Static Discharge**
Not sensitive.

**Protective equipment and precautions for firefighters**
Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. Remove all sources of ignition. 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.

**Methods for Containment**
Use a wet sweeping compound or water to prevent dust formation.

**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**
Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

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

Incompatible products
None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene (108-88-3)</td>
<td>TWA: 20 ppm</td>
<td>Ceiling: 300 ppm</td>
<td>IDLH: 500 ppm</td>
<td>Mexico: TWA 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 100 ppm</td>
<td>Mexico: TWA 188 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 375 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 560 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>British Columbia</th>
<th>Quebec</th>
<th>Ontario TWAEV</th>
<th>Alberta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene (108-88-3)</td>
<td>TWA: 20 ppm</td>
<td>TWA: 188 mg/m³</td>
<td>TWA: 20 ppm</td>
<td>TWA: 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin</td>
<td></td>
<td>TWA: 188 mg/m³</td>
</tr>
</tbody>
</table>

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
Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection
Protective gloves

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. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. 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. These recommendations apply to the product as supplied.

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>Solid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>6.85</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
None under normal use conditions.

Chemical Stability
Stable.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Excessive heat

Incompatible materials
None known.

Hazardous Decomposition Products
Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral
1750 mg/kg (rat)

LD50 Dermal
> 5000 mg/kg (rat)

LC50 Inhalation
> 2.07 mg/L 4 hr (rat)

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

Skin corrosion/irritation
Moderately irritating (rabbit).

Sensitization
Non-sensitizing

Information on toxicological effects

Symptoms
Signs of toxicity in laboratory animals given sulfentrazone included clonic convulsions, ataxia, hypersensitivity to touch, chromorhinorrhea, abdominogenital staining, decreased locomotion, lacrimation, nasal discharge, and squinting eyes.

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

Chronic toxicity
Sulfentrazone: Prolonged exposure cause decreased hemoglobin content and hematocrit, and increased spleen weight and splenic extramedullary hematopoiesis at high doses in animal studies.

Mutagenicity
Sulfentrazone, Chlorimuron-ethyl: Not genotoxic in laboratory studies.

Carcinogenicity
Sulfentrazone, Chlorimuron-ethyl: No evidence of carcinogenicity from animal studies. This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product.

Neurological effects
Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Reproductive toxicity
Sulfentrazone, Chlorimuron-ethyl: No toxicity to reproduction in animal studies.

Developmental toxicity
Sulfentrazone: Fetal weight decreased; delayed skeletal ossification observed at maternally
non-toxic doses are reversible effects and a dose-response is established; malformations observed in fetuses at maternally toxic doses and consistent with the mode of action for protoporphyrngon oxidase inhibitors. Developmental toxicity testing and results were generated for sulfentrazone with toluene present as an impurity.

Chlorimuron-ethyl: Maternal and fetal NOELs were 250 ppm based on reduced maternal and fetal body weights. It was weakly teratogenic in rats and non-teratogenic in rabbits. Not classified.

May cause damage to organs through prolonged or repeated exposure.

Sulfentrazone, Chlorimuron-ethyl: Hematopoietic system.

Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

**Sulfentrazone (122836-35-5)**

<table>
<thead>
<tr>
<th>Active Ingredient(s)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfentrazone</td>
<td>72 h EC50</td>
<td>Algae</td>
<td>32.8</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>48 h EC50</td>
<td>Crustacea</td>
<td>60.4</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>96 h LC50</td>
<td>Fish</td>
<td>94</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>21 d NOEC</td>
<td>Fish</td>
<td>5.9</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>21 d NOEC</td>
<td>Crustacea</td>
<td>0.51</td>
<td>mg/L</td>
</tr>
</tbody>
</table>

**Chlorimuron ethyl (90982-32-4)**

<table>
<thead>
<tr>
<th>Active Ingredient(s)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorimuron-ethyl</td>
<td>LC50</td>
<td>Fish</td>
<td>100-1000</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>LD50 Dietary</td>
<td>Bird</td>
<td>&gt;5620</td>
<td>ppm</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Bird</td>
<td>&gt;2510</td>
<td>mg/kg</td>
</tr>
</tbody>
</table>

**Persistence and degradability**


Chlorimuron-ethyl: Moderately persistent.

**Bioaccumulation**

Sulfentrazone, Chlorimuron-ethyl: The substance does not have a potential for bioconcentration.

**Mobility**

Sulfentrazone: Mobile, Has potential to reach ground water.

### 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, state and federal regulations. Refer to the product label for container disposal instructions. Do not reuse or refill this container.

### 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.

UN/ID no
UN3077
Proper Shipping Name
Environmentally hazardous substance, solid, n.o.s.
Hazard class
9
Packing Group
III
Marine Pollutant
Sulfentrazone.
Description
UN3077, Environmentally hazardous substance, solid, n.o.s. (sulfentrazone), 9, PGIII, Marine Pollutant

ICAO/IATA
UN/ID no
UN3077
Proper Shipping Name
Environmentally hazardous substance, solid, n.o.s.
Hazard class
9
Packing Group
III
Description
UN3077, Environmentally hazardous substance, solid, n.o.s. (sulfentrazone), 9, PGIII, Marine Pollutant

IMDG/IMO
UN/ID no
UN3077
Proper Shipping Name
Environmentally hazardous substance, solid, n.o.s.
Hazard class
9
Packing Group
III
EmS No.
F-A, S-F
Marine Pollutant
Sulfentrazone
Description
UN3077, Environmentally hazardous substance, solid, n.o.s. (sulfentrazone), 9, PGIII, Marine Pollutant

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:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorimuron ethyl - 90982-32-4</td>
<td>90982-32-4</td>
<td>3.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Toluene - 108-88-3</td>
<td>108-88-3</td>
<td>1-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute health hazard    Yes
Chronic health hazard  Yes
Fire hazard            No
Sudden release of pressure hazard  No
Reactive Hazard        No

Clean Water Act
This product contains the following substances which are regulated 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):

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

Page 7 / 9
Authority® Maxx Herbicide

required on the pesticide label:

CAUTION
Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through skin.
This pesticide is toxic to marine/estuarine invertebrates

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene - 108-88-3</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by 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>Chlorimuron ethyl</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90982-32-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>108-88-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS:ELINC S (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>Chlorimuron ethyl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>90982-32-4</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</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>
<tr>
<td>108-88-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mexico - Grade Slight risk, Grade 1

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Carcinogen Status</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td></td>
<td>Mexico: TWA 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: TWA 188 mg/m³</td>
</tr>
</tbody>
</table>

WHMIS Statement
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D2A - Very toxic materials

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Hazards</td>
<td>Flammability</td>
<td>Physical hazard</td>
<td>Personal Protection</td>
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<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Revision date: 2016-05-26
Reason for revision: (M)SDS sections updated

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regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a
manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC
Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use
of the products or reliance on such information.

Prepared By:

FMC Corporation

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End of Safety Data Sheet