

Issuing Date 07-Jun-2021

Revision Date 18-Dec-2023

Revision Number 1

## 1. Identification

### Product identifier

Product Name Willowood Sulfen Met

### Other means of identification

Product Code(s) 87290-70

Synonyms Sulfentrazone + Metribuzin

### Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product labels

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Generic Crop Science, LLC.  
1887 Whitney Mesa Drive #9740  
Henderson, NV 89014-2069  
Tel: 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).

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (repeated exposure)	Category 2

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements

#### Warning

#### Hazard statements

May form combustible dust concentrations in air.

Harmful if swallowed.  
 Causes serious eye irritation.  
 May cause damage to organs through prolonged or repeated exposure.



#### Precautionary Statements - Prevention

Do not eat, drink or smoke when using this product  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear eye protection/ face protection  
 Do not breathe dust/fume/gas/mist/vapors/spray

#### Precautionary Statements - Response

Get medical advice/attention if you feel unwell  
 IF IN EYES: 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  
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 Rinse mouth

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Other information

Causes mild skin irritation. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

#### Unknown acute toxicity

10.1004 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

##### Synonyms

Sulfentrazone + Metribuzin

Chemical name	CAS No	Weight-%	Trade secret
Kaolin	1332-58-7	30-40	*
Metribuzin	21087-64-9	20-30	*
Sulfentrazone	122836-35-5	10-20	*
Ammonium sulfate	7783-20-2	5-10	*
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5	1-5	*
Lignin, alkali, reaction products with formaldehyde and sodium bisulfite	68512-35-6	1-5	*
Naphthalenesulfonic acids, branched and linear Bu derivs., sodium salts	91078-64-7	1-5	*
Sodium carbonate	497-19-8	1-5	*
Docusate sodium	577-11-7	<0.5	*

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

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

<b>Symptoms</b>	May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation.
-----------------	---

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
---------------------------	------------------------

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	None known based on information supplied.
<b>Specific hazards arising from the chemical</b>	None known based on information supplied.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	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

<b>Personal precautions</b>	Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
<b>Other information</b>	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** Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in fluorinated HDPE bottles at ambient temperature.

## 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
Kaolin 1332-58-7	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Metribuzin 21087-64-9	TWA: 5 mg/m <sup>3</sup>	(vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

### **Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### 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** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Dark brown granules
<b>Physical state</b>	Solid
<b>Color</b>	Dark brown
<b>Odor</b>	Strong bitter
<b>Odor threshold</b>	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	6.9	
<b>Melting point / freezing point</b>		No data available
<b>Initial boiling point and boiling range</b>		No data available
<b>Flash point</b>		No data available
<b>Evaporation rate</b>		No data available
<b>Flammability</b>		No data available
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>		No data available
<b>Lower flammability or explosive limits</b>		No data available
<b>Vapor pressure</b>		No data available
<b>Vapor density</b>		No data available
<b>Relative density</b>	0.675 g/cm <sup>3</sup>	
<b>Water solubility</b>		No data available
<b>Solubility(ies)</b>		No data available
<b>Partition coefficient</b>		No data available
<b>Autoignition temperature</b>		No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		No data available
<b><u>Other information</u></b>		
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	
<b>Softening point</b>	No information available	
<b>Molecular weight</b>	No information available	
<b>VOC Content (%)</b>	No information available	
<b>Liquid Density</b>	No information available	
<b>Bulk density</b>	No information available	

## 10. Stability and reactivity

<b>Reactivity</b>	None under normal use conditions.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Incompatible materials.
<b>Incompatible materials</b>	Incompatible with oxidizing agents.
<b>Hazardous decomposition products</b>	None known based on information supplied.

## 11. Toxicological information

**Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Prolonged contact may cause redness and irritation. Causes mild skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Symptoms</b>	May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.
-----------------	--

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

**ATEmix (oral)** 1,375.90 mg/kg

**Unknown acute toxicity**

10.1004 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	-
Metribuzin 21087-64-9	= 2020 mg/kg ( Rat )	> 5000 mg/kg ( rat )	> 2.045 mg/L ( Rat ) 4 h
Sulfentrazone 122836-35-5	> 2855 mg/kg ( Rat )	-	> 4.14 mg/L ( Rat ) 4 h
Ammonium sulfate 7783-20-2	= 2840 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
Naphthalenesulfonic acids, branched and linear Bu derivs., sodium salts 91078-64-7	= 1790 mg/kg ( Rat )	> 500 mg/kg ( Rat )	= 3.82 mg/L ( Rat ) 4 h
Sodium carbonate 497-19-8	= 4090 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 2300 mg/m <sup>3</sup> ( Rat ) 2 h
Docusate sodium 577-11-7	= 3080 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	-

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.

<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Target organ effects</b>	Liver. Respiratory system. Central nervous system. Thyroid. Gastrointestinal tract (GI).
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	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
Ammonium sulfate 7783-20-2	-	LC50: 123 - 128mg/L (96h, <i>Poecilia reticulata</i> ) LC50: 32.2 - 41.9mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 5.2 - 8.2mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =126mg/L (96h, <i>Poecilia reticulata</i> ) LC50: =18mg/L (96h, <i>Cyprinus carpio</i> ) LC50: =250mg/L (96h, <i>Brachydanio rerio</i> ) LC50: =420mg/L (96h, <i>Brachydanio rerio</i> ) LC50: =480mg/L (96h, <i>Brachydanio rerio</i> ) LC50: >100mg/L (96h, <i>Pimephales promelas</i> )	-	LC50: =14mg/L (48h, <i>Daphnia magna</i> )
Sodium carbonate 497-19-8	-	LC50: 310 - 1220mg/L (96h, <i>Pimephales promelas</i> ) LC50: =300mg/L (96h, <i>Lepomis macrochirus</i> )	-	EC50: =265mg/L (48h, <i>Daphnia magna</i> )
Docusate sodium 577-11-7	-	LC50: 20 - 40mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: <24mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =37mg/L (96h, <i>Lepomis macrochirus</i> )	-	EC50: =36mg/L (48h, <i>Daphnia magna</i> )

**Persistence and degradability** No information available.

**Bioaccumulation****Component Information**

Chemical name	Partition coefficient
Ammonium sulfate 7783-20-2	-5.1

**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.

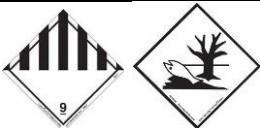
**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

**14. Transport information**

**DOT** Not regulated

\*Shipment by ground under DOT is not regulated as hazardous material, however it may be shipped per the applicable hazard classification below to facilitate multi-modal transport involving ICAO (IATA) or IMO.

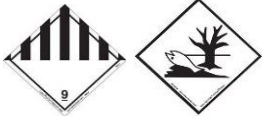
**IATA** Note: This classification is applicable for packagings of >5kg each

<b>UN Number</b>	UN 3077
<b>Proper Shipping Name</b>	Environmentally hazardous substance, solid, n.o.s. (Metribuzin, Sulfentrazone)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Limited Quantity / Consumer Commodity Exception</b>	N/A. Not regulated as dangerous goods in packagings of 5 kg or less as long as the packaging meets all general requirements.
<b>Passenger and Cargo Aircraft Limitation</b>	See Packing Instruction 956. 10-50 kg maximum quantity per inner package (depending on inner package used) and 400 kg maximum net quantity per outer package. Combination and single packages are permitted including the use of intermediate bulk containers.
<b>Labels</b>	
<b>Description</b>	UN3077, Environmentally hazardous substance, solid, n.o.s. (Metribuzin, Sulfentrazone), 9, III



**IMDG**

Note: This classification is applicable for packagings of &gt;5kg each

<b>UN Number</b>	UN 3077
<b>Proper Shipping Name</b>	Environmentally hazardous substance, solid, n.o.s. (Metribuzin, Sulfentrazone)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III
<b>Limited Quantity Exception</b>	N/A. Not regulated as dangerous goods in packagings of 5 kg or less as long as the packaging meets all general requirements.
<b>Hazardous Substances (RQ) and Marine Pollutants</b>	Not listed in 49 CFR 172.101 Appendix A or B, or the Index to the IMDG Code.
<b>Labels</b>	
<b>Description</b>	UN3077, Environmentally hazardous substance, solid, n.o.s. (Metribuzin, Sulfentrazone), 9, III, MARINE POLLUTANT
<b>EMS</b>	F-A, S-F

**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 %
Metribuzin - 21087-64-9	1.0
Ammonium sulfate - 7783-20-2	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 does not contain any Proposition 65 chemicals.

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Kaolin 1332-58-7	X	X	X
Metribuzin 21087-64-9	X	X	X
Ammonium sulfate 7783-20-2	-	X	X
Glycerin 56-81-5	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number 87290-70

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

**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

Issuing Date 07-Jun-2021

Revision Date 18-Dec-2023

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**