1. IDENTIFICATION

Product identifier
Product Name Metribuzin 70 WDG

Other means of identification
Product Code 83529-44
Synonyms Metrixx
Registration Number(s) 83529-44

Recommended use of the chemical and restrictions on use
Recommended Use Herbicide
Uses advised against No information available

Details of the supplier of the safety data sheet
Manufacturer Address Sharda USA LLC
P.O. Box 640
Hockessin, DE 19707
Website: www.shardausa.com

Emergency telephone number
Company Phone Number 610-350-6930 (US)
+91 22 5678 2800 (India)
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
POISON CONTROL CENTER: 800-222-1222

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

Not classified

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance  dry, free flowing granules
Physical state  Solid
Odor  Slight Sulfurous

Precautionary Statements - Prevention
Not applicable

Precautionary Statements - Response

---
Not applicable

**Hazards not otherwise classified (HNOC)**
Not applicable

**Other Information**
Very toxic to aquatic life with long lasting effects. May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Mild eye irritation.

**Unknown acute toxicity**
30% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td>Metribuzin</td>
<td>21087-64-9</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>Kaolin *</td>
<td>1332-58-7</td>
<td>7 - 13</td>
</tr>
<tr>
<td></td>
<td>Other inert ingredients *</td>
<td>Proprietary</td>
<td>7 - 13</td>
</tr>
<tr>
<td></td>
<td>Silica, amorphous, precipitated and gel *</td>
<td>112926-00-8</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.*

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice**
Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.

**Eye contact**
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. Call a poison control center or doctor for treatment advice.

**Skin contact**
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.

**Inhalation**
Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.

**Ingestion**
Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Self-protection of the first aider**
Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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

**Symptoms**
May cause redness and tearing of the eyes.
Indication of any immediate medical attention and special treatment needed

Note to physicians  Treat symptomatically. The compound does not cause any definite symptoms that would be diagnostic. Poisoning is accompanied by breathing difficulties and sedation.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical, CO2, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media  None.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating and toxic gases and vapors.


Explosion data
Sensitivity to Mechanical Impact  None.
Sensitivity to Static Discharge  None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions  Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Avoid creating dust.

For emergency responders  Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions  Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

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

Methods for cleaning up  Avoid creating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling  Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions  Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep in properly labeled containers.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin 21087-64-9</td>
<td>TWA: 5 mg/m³</td>
<td>-</td>
<td>TWA: 5 mg/m³</td>
</tr>
<tr>
<td>Kaolin 1332-58-7</td>
<td>TWA: 2 mg/m³ particulate matter containing no asbestos and &lt;1% crystalline silica, respirable fraction</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction</td>
<td>TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust</td>
</tr>
<tr>
<td>Silica, amorphous, precipitated and gel 112926-00-8</td>
<td>-</td>
<td>TWA: 20 mppcf: (80)/(% SiO2) mg/m³ TWA</td>
<td>-</td>
</tr>
</tbody>
</table>

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Skin and body protection
Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

Respiratory protection
Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>dry, free flowing granules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>beige</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Slight Sulfurous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Values</td>
<td>Remarks</td>
<td>Method</td>
</tr>
<tr>
<td>pH</td>
<td>8.2</td>
<td>solution (1 %)</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Upper flammability limit: No information available
Lower flammability limit: No information available
Vapor pressure: 0 mmHg @ 25 °C
Vapor density: No information available
Relative density: 0.58
Water solubility: dispersible
Solubility in other solvents: No information available
Partition coefficient: No information available
Autoignition temperature: No information available
Decomposition temperature: No information available
Kinematic viscosity: No information available
Dynamic viscosity: No information available
Explosive properties: Not an explosive
Oxidizing properties: Not applicable

Other Information
Softening point: No information available
Molecular weight: No information available
VOC Content (%): No information available
Density: No information available
Bulk density: 0.58 g/ml

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Elevated Temperature. Storage near to reactive materials.
Incompatible materials
Strong oxidizing agents.
Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Acute Oral LD50 (rat): >2000 mg/kg
Acute Dermal LD50 (rabbit): > 2000 mg/kg Irritation (rabbit): Causes minimal eye irritation.
Skin Irritation (rabbit): Not an irritant.
Inhalation LC50 (rat): >2.62 mg/L (4 HR)
Skin Sensitization (guinea pig): Not a sensitizer

Inhalation
Based on available data, the classification criteria are not met.

Eye contact
Based on available data, the classification criteria are not met. May cause slight irritation.

Skin contact
Based on available data, the classification criteria are not met.

Ingestion
Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>= 2020 mg/kg (Male Rat) = 1100 mg/kg (Female Rat)</td>
<td>&gt; 5000 mg/kg (Rat) &gt; 20 g/kg (Rabbit)</td>
<td>&gt; 860 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>
Information on toxicological effects

Symptoms
May cause redness and tearing of the eyes.

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

Sensitization
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT - single exposure
Based on available data, the classification criteria are not met.

STOT - repeated exposure
Based on available data, the classification criteria are not met.

Chronic toxicity
Avoid repeated exposure. May cause adverse liver effects.

Target Organ Effects
Thyroid, liver, Central nervous system.

Aspiration hazard
Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

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

ATEmix (oral) >2000.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects

30 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish (rainbow trout)</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>Green algae 72-hr EC50 = 0.007 mg/L</td>
<td>96-hr LC50 = 74.6 mg/L</td>
<td>Daphnia magna 48-hr EC50 = 98.5 mg/L</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not readily biodegradable.

Bioaccumulation
Not likely to bioaccumulate.

Other adverse effects
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Disposal of wastes

Contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.
14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated

IATA

UN/ID no: UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Packing Group: III
ERG Code: 9L
Special Provisions: A158, A179, A97, A197
Description: UN3077, Environmentally hazardous substance, solid, n.o.s. (Metribuzin), 9, III

IMDG

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
Special Provisions: 274, 335, 966, 967
Description: UN3077, Environmentally hazardous substance, solid, n.o.s. (Metribuzin), 9, III

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENC - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin - 21087-64-9</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute health hazard: No
- Chronic Health Hazard: No
Fire hazard  No
Sudden release of pressure hazard  No
Reactive Hazard  No

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metribuzin</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>21087-64-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaolin</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1332-58-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>112926-00-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-44

EPA Statement
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:

Difference between SDS and EPA Pesticide label
CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Personal protection X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Issue Date 04-Jul-2016
Revision Date 04-Jul-2016
Revision Note No information available

Disclaimer
The information provided in this Material 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

04Jul2016