

# SAFETY DATA SHEET

Issuing Date 12-Jul-2013

Revision Date 29-Nov-2020

Revision Number 2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product Name **2,4-DB 200**

### Other means of identification

**Product Code** 2100201  
**CAS Number** 2758-42-1  
**Formula** C<sub>14</sub>H<sub>18</sub>Cl<sub>2</sub>O<sub>3</sub>  
**Synonyms** 2,4-DB Dimethylamine Salt  
**EPA Registration Number** 2749-516

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

**Recommended Use** Agriculture  
**Uses advised against** Do not use where contact with food or drinking water is possible. Avoid prolonged contact with eyes, skin, and clothing.

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

**Supplier Address** ACETO LIFE SCIENCES, LLC  
4 Tri Harbor Court  
Port Washington, NY 11050-4661  
Phone: (516) 627-6000  
Fax: (516) 627-6093  
Email: aceto@aceto.com

### Emergency Telephone Number(s)

ChemTrec: 1-800-424-9300 Outside of the United States: 1-703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification

|                                      |            |
|--------------------------------------|------------|
| Acute toxicity - Oral                | Category 2 |
| Acute toxicity - Dermal              | Category 4 |
| Acute toxicity - Inhalation (Vapors) | Category 4 |
| Skin Corrosion/Irritation            | Category 1 |
| Serious eye damage/eye irritation    | Category 1 |
| Respiratory Sensitization            | Category 1 |
| Skin Sensitization                   | Category 1 |
| Chronic aquatic toxicity             | Category 1 |
| Acute aquatic toxicity               | Category 1 |

### Label elements

#### Emergency Overview

**Signal Word**  
**DANGER**

**Hazard statements**  
Fatal if swallowed

Harmful in contact with skin  
 Harmful if inhaled  
 Causes severe skin burns and eye damage  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 May cause an allergic skin reaction  
 Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

**Appearance**

Light Amber Clear

**Physical State**

Liquid

**Odor**

Slight Phenoxy

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 In case of inadequate ventilation wear respiratory protection  
 Contaminated work clothing should not be allowed out of the workplace

**Precautionary Statements - Response**

Specific treatment (see supplemental first aid instructions on this label)  
 Immediately call a POISON CENTER or doctor/physician  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present .  
 Immediately call a POISON CENTER or doctor/physician  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Wash contaminated clothing before reuse  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 If skin irritation or rash occurs: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth  
 Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None known

**Other Information**

73.8 % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**

2,4-DB Dimethylamine Salt

**Formula** C14H18Cl2O3

| Chemical name  | CAS No.   | Weight-% | North American Hazard Indicator |
|--|-----------|----------|---------------------------------|
| Dimethylamine Salt of 4-(2,4-Dichlorophenoxy) Butyric Acid | 2758-42-1 | 26.2     | True                            |
| Other Ingredients  | N/A       | 73.8     | False                           |

#### 4. FIRST AID MEASURES

##### First Aid Measures

|   |  |
|---|--|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance.   |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.  |
| <b>Skin Contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Destroy contaminated shoes. Call a physician or poison control center immediately.              |
| <b>Inhalation</b>                         | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.   |
| <b>Ingestion</b>                          | If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. |
| <b>Self-Protection of the First Aider</b> | Use personal protective equipment as required. Avoid contact with eyes, skin and clothing.   |

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

**Signs and Symptoms** No information available.

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

**Notes to Physician** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

|  |   |
|--|---|
| <b><u>Flammable properties</u></b>           | Not available.  |
| <b><u>Suitable Extinguishing Media</u></b>   | Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO2).          |
| <b><u>Unsuitable Extinguishing Media</u></b> | Not available.  |
| <b><u>Hazardous Combustion Products</u></b>  | Thermal decomposition or combustion may produce hazardous gases and/or materials. |
| <b><u>Explosion Data</u></b>                 | Not available   |
| <b>Sensitivity to mechanical impact</b>      | Not available.  |
| <b>Sensitivity to static discharge</b>       | Not available.  |

##### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

##### 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.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

**Environmental Precautions** Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

### Methods and material for containment and cleaning up

**Methods for Clean-up** Evacuate personnel to safe areas. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Avoid repeated exposure.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children. Protect from freezing. Store at temperatures above 32°F. If product is allowed to freeze, warm to 50°F and agitate thoroughly before using.

**Incompatible Materials** Strong Oxidizing Agents. Bases. Acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical name   | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|-----------|----------|------------|
| Dimethylamine Salt of<br>4-(2,4-Dichlorphenoxy) Butyric Acid<br>2758-42-1 | -         | -        | -          |
| Other Ingredients<br>N/A  | -         | -        | -          |

### Appropriate engineering controls

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

**Eye/Face Protection** Goggles. Face shield.

**Skin and body protection** Use suitable eye protection and gloves.

|                                       |  |
|---------------------------------------|--|
| <b>Respiratory Protection</b>         | In case of insufficient ventilation, wear suitable respiratory equipment.  |
| <b>General Hygiene Considerations</b> | Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. For additional information consult the EPA Pesticide Label. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                       |                          |
|-----------------------|--------------------------|
| <b>Appearance</b>     | Light Amber Clear        |
| <b>Physical State</b> | Liquid                   |
| <b>Odor</b>           | Slight Phenoxy           |
| <b>Odor Threshold</b> | No information available |

| <u>Property</u>                               | <u>Values</u>            | <u>Remarks • Method</u>       |
|---|--------------------------|-------------------------------|
| <b>pH</b>                                     | 6.92                     |                               |
| <b>Melting point / Freezing point</b>         | 0 °C                     | Literary Reference            |
| <b>Boiling point / boiling range</b>          | No information available |                               |
| <b>Flash Point</b>                            | > 100 °C                 | Pensky-Marten CC (closed cup) |
| <b>Evaporation Rate</b>                       | No information available |                               |
| <b>Flammability (solid, gas)</b>              | No information available |                               |
| <b>Flammability Limit in Air</b>              | No information available |                               |
| <b>Upper flammability limit</b>               | No information available |                               |
| <b>Lower flammability limit</b>               | Not available            |                               |
| <b>Vapor Pressure</b>                         | No information available |                               |
| <b>Vapor Density</b>                          | Not available            |                               |
| <b>Specific Gravity</b>                       | 1.094 g/ml@20°C          |                               |
| <b>Water Solubility</b>                       | No information available |                               |
| <b>Solubility in other solvents</b>           | No information available |                               |
| <b>Partition coefficient: n-octanol/water</b> | Not available            |                               |
| <b>Autoignition temperature °C</b>            | No Data Available        | Estimated                     |
| <b>Decomposition temperature</b>              | No Data Available        |                               |
| <b>Kinematic Viscosity</b>                    | No information available |                               |
| <b>Dynamic Viscosity</b>                      | 6.468 Centistokes@20°C   |                               |
| <b>Explosive Properties</b>                   | No information available |                               |
| <b>Oxidizing Properties</b>                   | No information available |                               |

### Other Information

|                                  |                          |
|----------------------------------|--------------------------|
| <b>Softening Point</b>           | No information available |
| <b>Molecular Weight</b>          | 294.18                   |
| <b>VOC content</b>               | No information available |
| <b>Liquid Density</b>            | 8.9 – 9.3 lb/Gal         |
| <b>Bulk density</b>              | No information available |
| <b>Corrosion characteristics</b> | No information available |

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                       | Not applicable.  |
| <b>Chemical Stability</b>               | Stable under normal conditions   |
| <b>Conditions to Avoid</b>              | Heat, flames and sparks.   |
| <b>Incompatible Materials</b>           | Strong Oxidizing Agents. Bases. Acids.   |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide. Carbon dioxide (CO <sub>2</sub> ). Hydrogen chloride gas. Nitrogen oxides (NO <sub>x</sub> ). |

**Possibility of Hazardous Reactions**

None under normal processing

## 11. TOXICOLOGICAL INFORMATION

**Product Information**

| Chemical name  | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|-----------|-------------|-----------------|
| Dimethylamine Salt of 4-(2,4-Dichlorophenoxy) Butyric Acid | -         | -           | -               |
| Other Ingredients  | -         | -           | -               |

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

**Information on likely routes of exposure**

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Corrosive to the eyes and may cause severe damage including blindness. Severe eye irritation. Avoid contact with eyes.   |
| <b>Skin</b>       | May be harmful in contact with skin. Substance may cause slight skin irritation. May aggravate existing skin disease. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Avoid contact with skin.             |
| <b>Inhalation</b> | May be harmful by inhalation. May cause irritation of the mucous membranes. May cause irritation of respiratory tract. Avoid breathing vapors or mists. May aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. |
| <b>Ingestion</b>  | May be fatal if swallowed. Do not take internally.   |

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

**Symptoms** No information available.

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

|                                      |   |
|--------------------------------------|---|
| <b>Carcinogenicity</b>               | Chronic effects were observed in liver, kidney, heart and blood chemistry. The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-DB lifetime feeding studies in rats and mice did not show carcinogenic potential. |
| <b>Irritation</b>                    | Eye, rabbit: Severe / Corrosive   |
| <b>Serious eye damage/irritation</b> | No information available.   |
| <b>Skin Corrosion/Irritation</b>     | No information available.   |
| <b>Sensitization</b>                 | Repeated contact may cause allergic reactions in very susceptible persons.  |
| <b>Reproductive Effects</b>          | No impairment of reproductive function attributable to 2,4-DB has been noted in laboratory animal studies. At doses toxic to parental animals, there were effects to kidneys, adrenals and ovaries of offspring. At the highest dose, offspring mortalities and growth reductions were observed during lactation.   |
| <b>Mutagenic Effects</b>             | No information available.   |
| <b>Developmental Effects</b>         | Studies in laboratory animals with 2,4-DB have shown early resorptions, decreased fetal   |

body weights and skeletal variations in the offspring at doses toxic to other animals. These are considered to result from maternal toxicity.

**STOT - single exposure** No information available.

**STOT - Repeated Exposure** No information available.

**Chronic Toxicity** Avoid repeated exposure.

**Target Organ Effects** Repeated overexposure may cause effects to: Liver, Kidney, Heart, Thyroid, Adrenals, Blood, Stomach, Reduced body weight, Eyes, Skin.

**Aspiration Hazard** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Very toxic to aquatic life Very toxic to aquatic life with long lasting effects  
There is no known ecological information for this product

73.8 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name   | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|----------------------|------|----------------------------|-----------|
| Dimethylamine Salt of 4-(2,4-Dichlorophenoxy) Butyric Acid<br>2758-42-1 | -                    | -    | -                          | -         |
| Other Ingredients<br>N/A  | -                    | -    | -                          | -         |

**Persistence/Degradability** No information available.

**Bioaccumulation/Accumulation** No information available.

**Mobility in Soil** No information available.

| Chemical name   | log Pow = |
|---|-----------|
| Dimethylamine Salt of 4-(2,4-Dichlorophenoxy) Butyric Acid<br>2758-42-1 | -         |
| Other Ingredients<br>N/A  | -         |

**Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Disposal Methods** Contact waste disposal services. Dispose of in accordance to EPA Pesticide Label Instructions.

**Contaminated Packaging** Dispose of in accordance to EPA Pesticide Label Instructions.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

|                    |               |
|--------------------|---------------|
| <b><u>TDG</u></b>  | Not regulated |
| <b><u>MEX</u></b>  | Not regulated |
| <b><u>ICAO</u></b> | Not regulated |
| <b><u>IATA</u></b> | Not regulated |
| <b><u>IMDG</u></b> | Not regulated |
| <b><u>RID</u></b>  | Not regulated |
| <b><u>ADR</u></b>  | Not regulated |
| <b><u>ADN</u></b>  | Not regulated |

## 15. REGULATORY INFORMATION

### *International Inventories*

|                            |                 |
|----------------------------|-----------------|
| <b>TSCA</b>                | Does not comply |
| <b>Canada (DSL)</b>        | Does not comply |
| <b>EU (EINECS)</b>         | Does not comply |
| <b>EU (ELINCS)</b>         | Does not comply |
| <b>Japan (ENCS)</b>        | Does not comply |
| <b>China (IECSC)</b>       | Does not comply |
| <b>Korea (KECL)</b>        | Does not comply |
| <b>Philippines (PICCS)</b> | Does not comply |
| <b>Australia (AICS)</b>    | Does not comply |
| <b>Mexico INV</b>          | Does not comply |
| <b>Taiwan INV</b>          | Does not comply |

| Chemical name  | U.S.A. (TSCA) | Canada (DSL)  | EU (EINECS)  | EU (ELINCS)         |                  |
|--|---------------|---------------|--------------|---------------------|------------------|
| Dimethylamine Salt of 4-(2,4-Dichlorphenoxy) Butyric Acid              | -             | -             | X            | -                   |                  |
| Other Ingredients  | -             | -             | -            | -                   |                  |
| Component  | Japan (ENCS)  | China (IECSC) | Korea (KECL) | Philippines (PICCS) | Australia (AICS) |
|  | -             | -             | -            | -                   | -                |
|  | -             | -             | -            | -                   | -                |
| Chemical name  | Mexico INV    |               | Taiwan INV   |                     |                  |
| Dimethylamine Salt of 4-(2,4-Dichlorphenoxy) Butyric Acid<br>2758-42-1 | -             |               | -            |                     |                  |
| Other Ingredients<br>N/A   | -             |               | -            |                     |                  |

This material as a whole is exempt from the TSCA Inventory, FIFRA Regulated Pesticides, and Canadian PMRA Regulations.

### *Federal Regulations*

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any 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**

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any HAPs.

**VOC content**

This Product does not contain any VOCs

**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

*State Regulations***California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

This product does not contain any State Right-to-Know chemicals.

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

*Canada***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.

|                              |
|------------------------------|
| <b>16. OTHER INFORMATION</b> |
|------------------------------|

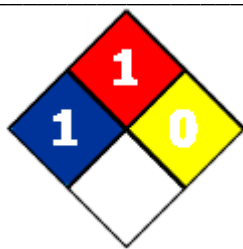
**NFPA**

Health 1

Flammability 1

Instability 0

Physical Hazard 0



**Issuing Date** 12-Jul-2013  
**Revision Date** 29-Nov-2020  
**Revision Summary**  
Not available

**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**