

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## Calcium (>70%) Salts Formulation

|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number:    | Date of last issue: -           |
| 1.0     | 08/13/2025     | 11568653-00001 | Date of first issue: 08/13/2025 |

### SECTION 1. IDENTIFICATION

Product name : Calcium (>70%) Salts Formulation  
Product code : Biocid  
Other means of identification : No data available

#### Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc  
Address : 37 McCarville Street  
Charlottetown, PE C1E 2A7  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.com

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

Recommended use : Veterinary product  
Restrictions on use : Not applicable

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Serious eye damage : Category 1

#### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H318 Causes serious eye damage.

Precautionary Statements : **Prevention:**  
P280 Wear eye protection and face protection.  
**Response:**  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.

#### Other hazards

Contact with dust can cause mechanical irritation or drying of the skin.  
May form explosive dust-air mixture during processing, handling or other means.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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### Components

| Chemical name                         | Common Name/Synonym                       | CAS-No.   | Concentration (% w/w) |
|---------------------------------------|---|-----------|-----------------------|
| Calcium diformate                     | No data available                         | 544-17-2  | $\geq 30 - < 60$ *    |
| Calcium bis(dihydrogenorthophosphate) | Calcium dihydrogen phosphate              | 7758-23-8 | $\geq 10 - < 30$ *    |
| Citric acid                           | 2-hydroxypropane-1,2,3-tricarboxylic acid | 77-92-9   | $\geq 10 - < 30$ *    |
| Calcium dipropionate                  | Propionic acid hemicalcium salt           | 4075-81-4 | $\geq 5 - < 10$ *     |

\* Actual concentration or concentration range is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : Wash with water and soap.  
Get medical attention if symptoms occur.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.  
Contact with dust can cause mechanical irritation or drying of the skin.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.

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- |  |   |
|--|---|
| Specific hazards during fire fighting          | : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.<br>Exposure to combustion products may be a hazard to health.                   |
| Hazardous combustion products                  | : Carbon oxides<br>Metal oxides<br>Oxides of phosphorus   |
| Specific extinguishing methods                 | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment for fire-fighters | : In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment.  |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- |   |  |
|---|--|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).   |
| Environmental precautions   | : Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained.  |
| Methods and materials for containment and cleaning up               | : Sweep up or vacuum up spillage and collect in suitable container for disposal.<br>Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).<br>Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.<br>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

### SECTION 7. HANDLING AND STORAGE

- |                    |   |
|--------------------|---|
| Technical measures | : Static electricity may accumulate and ignite suspended dust causing an explosion.<br>Provide adequate precautions, such as electrical grounding |
|--------------------|---|

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|                             |   |  |
|-----------------------------|---|--|
| Local/Total ventilation     | : | and bonding, or inert atmospheres.   |
| Advice on safe handling     | : | Use only with adequate ventilation.  |
|                             | : | Do not breathe dust.   |
|                             | : | Do not swallow.  |
|                             | : | Do not get in eyes.  |
|                             | : | Avoid prolonged or repeated contact with skin.   |
|                             | : | Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment |
|                             | : | Keep container tightly closed.   |
|                             | : | Minimize dust generation and accumulation.   |
|                             | : | Keep container closed when not in use.   |
|                             | : | Keep away from heat and sources of ignition.   |
|                             | : | Take precautionary measures against static discharges.   |
|                             | : | Take care to prevent spills, waste and minimize release to the environment.  |
| Conditions for safe storage | : | Keep in properly labeled containers.   |
|                             | : | Keep tightly closed.   |
|                             | : | Store in accordance with the particular national regulations.  |
| Materials to avoid          | : | Do not store with the following product types:   |
|                             | : | Strong oxidizing agents  |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

|                      |   |   |
|----------------------|---|---|
| Engineering measures | : | All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.                                 |
|                      | : | Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). |
|                      | : | Minimize open handling.   |

### Personal protective equipment

|                        |   |  |
|------------------------|---|--|
| Respiratory protection | : | If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. |
| Filter type            | : | Combined particulates and organic vapor type   |
| Hand protection        | : |  |
| Material               | : | Chemical-resistant gloves  |
| Remarks                | : | Consider double gloving.   |
| Eye protection         | : | Wear safety glasses with side shields or goggles.  |
|                        | : | If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.  |
|                        | : | Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.                               |

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|                          |  |
|--------------------------|--|
| Skin and body protection | : Work uniform or laboratory coat.<br>Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.<br>Use appropriate degowning techniques to remove potentially contaminated clothing.  |
| Hygiene measures         | : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls. |

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|  |   |
|--|---|
| Appearance                                       | : powder  |
| Color  | : No data available   |
| Odor   | : No data available   |
| Odor Threshold                                   | : No data available   |
| pH   | : No data available   |
| Melting point/freezing point                     | : No data available   |
| Initial boiling point and boiling range          | : No data available   |
| Flash point                                      | : Not applicable  |
| Evaporation rate                                 | : Not applicable  |
| Flammability (solid, gas)                        | : May form explosive dust-air mixture during processing, handling or other means. |
| Flammability (liquids)                           | : Not applicable  |
| Upper explosion limit / Upper flammability limit | : No data available   |
| Lower explosion limit / Lower flammability limit | : No data available   |
| Vapor pressure                                   | : Not applicable  |
| Relative vapor density                           | : Not applicable  |
| Relative density                                 | : No data available   |

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|  |   |  |
|--|---|--|
| Density                                | : | No data available  |
| Solubility(ies)                        | : |  |
| Water solubility                       | : | No data available  |
| Partition coefficient: n-octanol/water | : | Not applicable   |
| Autoignition temperature               | : | No data available  |
| Decomposition temperature              | : | No data available  |
| Viscosity                              | : |  |
| Viscosity, kinematic                   | : | Not applicable   |
| Explosive properties                   | : | Not explosive  |
| Oxidizing properties                   | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight                       | : | No data available  |
| Particle characteristics               | : |  |
| Particle size                          | : | No data available  |

### SECTION 10. STABILITY AND REACTIVITY

|                                    |   |  |
|------------------------------------|---|--|
| Reactivity                         | : | Not classified as a reactivity hazard.   |
| Chemical stability                 | : | Stable under normal conditions.  |
| Possibility of hazardous reactions | : | May form explosive dust-air mixture during processing, handling or other means.<br>Can react with strong oxidizing agents. |
| Conditions to avoid                | : | Heat, flames and sparks.<br>Avoid dust formation.  |
| Incompatible materials             | : | Oxidizing agents   |
| Hazardous decomposition products   | : | No hazardous decomposition products are known.   |

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### **Product:**

|                     |   |  |
|---------------------|---|--|
| Acute oral toxicity | : | Acute toxicity estimate: > 2,000 mg/kg |
|---------------------|---|--|

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Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

### **Components:**

#### **Calcium diformate:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

#### **Calcium bis(dihydrogenorthophosphate):**

Acute oral toxicity : LD50 (Rat): 3,986 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.6 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

#### **Citric acid:**

Acute oral toxicity : LD50 (Mouse): 5,400 mg/kg

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **Calcium dipropionate:**

Acute oral toxicity : LD50 (Rat): 3,455.1 mg/kg  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC0 (Rat): 24.4 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Remarks: Based on data from similar materials

#### **Skin corrosion/irritation**

Not classified based on available information.

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### **Components:**

#### **Calcium diformate:**

|         |   |                         |
|---------|---|-------------------------|
| Species | : | Rabbit                  |
| Method  | : | OECD Test Guideline 404 |
| Result  | : | No skin irritation      |

#### **Calcium bis(dihydrogenorthophosphate):**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

#### **Citric acid:**

|         |   |                         |
|---------|---|-------------------------|
| Species | : | Rabbit                  |
| Method  | : | OECD Test Guideline 404 |
| Result  | : | No skin irritation      |

#### **Calcium dipropionate:**

|         |   |                         |
|---------|---|-------------------------|
| Species | : | Rabbit                  |
| Method  | : | OECD Test Guideline 404 |
| Result  | : | No skin irritation      |

### **Serious eye damage/eye irritation**

Causes serious eye damage.

### **Components:**

#### **Calcium diformate:**

|         |   |                                 |
|---------|---|---------------------------------|
| Species | : | Rabbit                          |
| Result  | : | Irreversible effects on the eye |
| Method  | : | OECD Test Guideline 405         |

#### **Calcium bis(dihydrogenorthophosphate):**

|         |   |                                 |
|---------|---|---------------------------------|
| Species | : | Rabbit                          |
| Result  | : | Irreversible effects on the eye |
| Method  | : | OECD Test Guideline 405         |

#### **Citric acid:**

|         |   |  |
|---------|---|--|
| Species | : | Rabbit                                       |
| Result  | : | Irritation to eyes, reversing within 21 days |
| Method  | : | OECD Test Guideline 405                      |

#### **Calcium dipropionate:**

|         |   |                                      |
|---------|---|--------------------------------------|
| Species | : | Rabbit                               |
| Result  | : | Irreversible effects on the eye      |
| Method  | : | OECD Test Guideline 405              |
| Remarks | : | Based on data from similar materials |



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### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### Respiratory sensitization

Not classified based on available information.

#### Components:

##### Calcium diformate:

|                    |  |
|--------------------|--|
| Test Type          | : Maximization Test                    |
| Routes of exposure | : Skin contact                         |
| Species            | : Guinea pig                           |
| Method             | : OECD Test Guideline 406              |
| Result             | : negative                             |
| Remarks            | : Based on data from similar materials |

##### Calcium bis(dihydrogenorthophosphate):

|                    |  |
|--------------------|--|
| Test Type          | : Local lymph node assay (LLNA)        |
| Routes of exposure | : Skin contact                         |
| Species            | : Mouse                                |
| Method             | : OECD Test Guideline 429              |
| Result             | : negative                             |
| Remarks            | : Based on data from similar materials |

##### Calcium dipropionate:

|                    |  |
|--------------------|--|
| Test Type          | : Maximization Test                    |
| Routes of exposure | : Skin contact                         |
| Species            | : Guinea pig                           |
| Result             | : negative                             |
| Remarks            | : Based on data from similar materials |

### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### Calcium diformate:

|                       |  |
|-----------------------|--|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative  |
| Genotoxicity in vivo  | : Test Type: Sex-linked recessive lethal test in Drosophila mel-anogaster (in vivo)<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |

##### Calcium bis(dihydrogenorthophosphate):

|                       |   |
|-----------------------|---|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471 |
|-----------------------|---|

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Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Test Type: in vitro micronucleus test  
Method: OECD Test Guideline 487  
Result: negative  
Remarks: Based on data from similar materials

### Citric acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: in vitro micronucleus test  
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow  
cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

### Calcium dipropionate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Hamster  
Application Route: Intraperitoneal injection  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

Not classified based on available information.

### Components:

#### Calcium dipropionate:

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

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Remarks : Based on data from similar materials

### Reproductive toxicity

Not classified based on available information.

### Components:

#### Calcium diformate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 416  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rabbit  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative  
Remarks: Based on data from similar materials

#### Calcium bis(dihydrogenorthophosphate):

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

#### Citric acid:

Effects on fetal development : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### Calcium dipropionate:

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

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### STOT-single exposure

Not classified based on available information.

#### Components:

##### **Citric acid:**

Assessment : May cause respiratory irritation.

### STOT-repeated exposure

Not classified based on available information.

### Repeated dose toxicity

#### Components:

##### **Calcium diformate:**

|                   |  |
|-------------------|--|
| Species           | : Rat                                  |
| NOAEL             | : 3,000 mg/kg                          |
| Application Route | : Ingestion                            |
| Exposure time     | : 13 Weeks                             |
| Method            | : OECD Test Guideline 408              |
| Remarks           | : Based on data from similar materials |

##### **Calcium bis(dihydrogenorthophosphate):**

|                   |  |
|-------------------|--|
| Species           | : Rat                                  |
| NOAEL             | : > 300 mg/kg                          |
| Application Route | : Ingestion                            |
| Exposure time     | : 28 Days                              |
| Method            | : OECD Test Guideline 407              |
| Remarks           | : Based on data from similar materials |

##### **Citric acid:**

|                   |               |
|-------------------|---------------|
| Species           | : Rat         |
| NOAEL             | : 4,000 mg/kg |
| LOAEL             | : 8,000 mg/kg |
| Application Route | : Ingestion   |
| Exposure time     | : 10 Days     |

##### **Calcium dipropionate:**

|                   |  |
|-------------------|--|
| Species           | : Dog                                  |
| NOAEL             | : 733.4 mg/kg                          |
| Application Route | : Ingestion                            |
| Exposure time     | : 90 Days                              |
| Method            | : OECD Test Guideline 409              |
| Remarks           | : Based on data from similar materials |

### Aspiration toxicity

Not classified based on available information.

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### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **Calcium diformate:**

- |  |   |   |
|--|---|---|
| Toxicity to fish   | : | LC0 (Danio rerio (zebra fish)): >= 1,000 mg/l<br>Exposure time: 96 h  |
| Toxicity to daphnia and other aquatic invertebrates                    | : | EC50 (Daphnia magna (Water flea)): > 1,000 mg/l<br>Exposure time: 48 h<br>Method: EPA-660/3-75-009<br>Remarks: Based on data from similar materials   |
| Toxicity to algae/aquatic plants                                       | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l<br>Exposure time: 72 h<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 500 mg/l<br>Exposure time: 72 h<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): >= 100 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials   |
| Toxicity to microorganisms   | : | NOEC: >= 22.1 mg/l<br>Exposure time: 28 d<br>Remarks: Based on data from similar materials  |

##### **Calcium bis(dihydrogenorthophosphate):**

- |   |   |  |
|---|---|--|
| Toxicity to fish                                    | : | LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials              |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials                     |
| Toxicity to algae/aquatic plants                    | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms                          | : | EC50: > 1,000 mg/l<br>Exposure time: 3 h   |

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|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
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Method: OECD Test Guideline 209

### Citric acid:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,535 mg/l  
Exposure time: 24 h

### Calcium dipropionate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 67.1 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 22.7 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 48.7 mg/l  
Exposure time: 72 h  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Pseudomonas putida): 59.6 mg/l  
Exposure time: 17 h  
Method: DIN 38 412 Part 8  
Remarks: Based on data from similar materials

### Persistence and degradability

#### Components:

#### Calcium diformate:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 86 %  
Exposure time: 28 d  
Method: OECD Test Guideline 306  
Remarks: Based on data from similar materials

#### Citric acid:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

#### Calcium dipropionate:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 74 %  
Exposure time: 30 d  
Remarks: Based on data from similar materials

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### Bioaccumulative potential

#### Components:

##### Calcium diformate:

|   |   |                      |
|---|---|----------------------|
| Partition coefficient: n-octanol/water        | : | log Pow: -2.3 - -1.9 |
| Remarks: Based on data from similar materials |   |                      |

##### Citric acid:

|  |   |                |
|--|---|----------------|
| Partition coefficient: n-octanol/water | : | log Pow: -1.72 |
|--|---|----------------|

##### Mobility in soil

No data available

##### Other adverse effects

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

|                        |   |   |
|------------------------|---|---|
| Waste from residues    | : | Do not dispose of waste into sewer.<br>Dispose of in accordance with local regulations.   |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>If not otherwise specified: Dispose of as unused product. |

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### Domestic regulation

#### TDG

Not regulated as a dangerous good

#### Special precautions for user

Not applicable

## SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:

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|       |   |                |
|-------|---|----------------|
| AICS  | : | not determined |
| DSL   | : | not determined |
| IECSC | : | not determined |

### SECTION 16. OTHER INFORMATION

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 08/13/2025  
Date format : mm/dd/yyyy



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