

**Calcium (>70%) Salts Formulation**

|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number:    | Date of last issue: -           |
| 1.0     | 13.08.2025     | 11568630-00001 | Date of first issue: 13.08.2025 |

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**Section 1: Identification**

**Product identifier** : Calcium (>70%) Salts Formulation

Product code : Biocid

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

Recommended use : Veterinary product

Restrictions on use : Not applicable

**Manufacturer or supplier's details**

Company : MSD

Address : 50 Tuas West Drive  
Singapore - Singapore 638408

Telephone : +1-908-740-4000

Emergency telephone number : 65 6697 2111 (24/7/365)

E-mail address : EHSDATASTEWARD@msd.com

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**Section 2: Hazard identification****Classification of the substance or mixture**

Serious eye damage/eye irritation : Category 1

**GHS Label elements, including precautionary statements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**  
P280 Wear eye protection/ 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/ doctor.

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**Other hazards which do not result in classification**

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

**Components**

| Chemical name                         | CAS-No.   | Concentration (% w/w) |
|---------------------------------------|-----------|-----------------------|
| Calcium diformate                     | 544-17-2  | >= 30 -< 50           |
| Calcium bis(dihydrogenorthophosphate) | 7758-23-8 | >= 10 -< 20           |
| Citric acid                           | 77-92-9   | >= 10 -< 20           |
| Calcium dipropionate                  | 4075-81-4 | >= 3 -< 10            |

**Section 4: First-aid measures****Description of necessary 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**

Risks : 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).

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

Treatment : Treat symptomatically and supportively.

**Section 5: Fire-fighting measures****Extinguishing media**

Suitable extinguishing media : Water spray

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Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

**Special hazards arising from the substance or mixture**

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.  
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Metal oxides  
Oxides of phosphorus

**Special protective actions for fire-fighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**Environmental precautions**

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up**

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
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.

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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.

Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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**Section 7: Handling and storage****Precautions for safe handling**

- |                         |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures      | : | Static electricity may accumulate and ignite suspended dust causing an explosion.<br>Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.                                                                                                                                                                                                                                                                                                                                                                                      |
| Local/Total ventilation | : | Use only with adequate ventilation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Advice on safe handling | : | Do not breathe dust.<br>Do not swallow.<br>Do not get in eyes.<br>Avoid prolonged or repeated contact with skin.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Minimize dust generation and accumulation.<br>Keep container closed when not in use.<br>Keep away from heat and sources of ignition.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment. |
| 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.                                                                |

**Conditions for safe storage, including any incompatibilities**

- |                             |   |                                                                                                                                |
|-----------------------------|---|--------------------------------------------------------------------------------------------------------------------------------|
| Conditions for safe storage | : | Keep in properly labelled containers.<br>Keep tightly closed.<br>Store in accordance with the particular national regulations. |
| Materials to avoid          | : | Do not store with the following product types:<br>Strong oxidizing agents                                                      |

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**Section 8: Exposure controls/personal protection****Control parameters****Occupational Exposure Limits**

Contains no substances with occupational exposure limit values.

**Appropriate engineering control 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.

**Individual protection measures, such as personal protective equipment (PPE)**

|                        |                                                                                                                                                                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face 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. |
| Skin protection        | : Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.                    |
| 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 vapour type                                                                                                                                                                                                                                                            |
| Hand protection        |                                                                                                                                                                                                                                                                                                            |
| Material               | : Chemical-resistant gloves                                                                                                                                                                                                                                                                                |
| Remarks                | : Consider double gloving.                                                                                                                                                                                                                                                                                 |

**Section 9: Physical and chemical properties**

|                 |                     |
|-----------------|---------------------|
| Appearance      | : powder            |
| Colour          | : No data available |
| Odour           | : No data available |
| Odour Threshold | : No data available |
| pH              | : No data available |

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|                                                  |   |                                                                                 |
|--------------------------------------------------|---|---------------------------------------------------------------------------------|
| 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                                                               |
| Vapour pressure                                  | : | Not applicable                                                                  |
| Relative vapour density                          | : | Not applicable                                                                  |
| Relative density                                 | : | No data available                                                               |
| Density                                          | : | No data available                                                               |
| Solubility(ies)<br>Water solubility              | : | No data available                                                               |
| Partition coefficient: n-octanol/water           | : | Not applicable                                                                  |
| Auto-ignition temperature                        | : | No data available                                                               |
| Decomposition temperature                        | : | No data available                                                               |
| Viscosity<br>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<br>Particle size        | : | No data available                                                               |

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**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<br>Skin contact<br>Ingestion<br>Eye contact |
|------------------------------------------|---|--------------------------------------------------------|

**Acute toxicity**

Not classified based on available information.

**Components:****Calcium diformate:**

|                       |   |                                                                                                                                                                                    |
|-----------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity   | : | LD50 (Rat): > 2,000 mg/kg                                                                                                                                                          |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity<br>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<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403 |
| Acute dermal toxicity     | : | LD50 (Rabbit): > 2,000 mg/kg<br>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 |

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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: vapour  
Remarks: Based on data from similar materials

**Skin corrosion/irritation**

Not classified based on available information.

**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

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**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 |

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Calcium diformate:**

|                 |                                        |
|-----------------|----------------------------------------|
| Test Type       | : Maximisation Test                    |
| Exposure routes | : 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)        |
| Exposure routes | : Skin contact                         |
| Species         | : Mouse                                |
| Method          | : OECD Test Guideline 429              |
| Result          | : negative                             |
| Remarks         | : Based on data from similar materials |

**Calcium dipropionate:**

|                 |                                        |
|-----------------|----------------------------------------|
| Test Type       | : Maximisation Test                    |
| Exposure routes | : Skin contact                         |
| Species         | : Guinea pig                           |
| Result          | : negative                             |
| Remarks         | : Based on data from similar materials |

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**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 <i>Drosophila melanogaster</i> (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<br>Result: negative<br>Remarks: Based on data from similar materials    |
|                       |   | Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative<br>Remarks: Based on data from similar materials |
|                       |   | Test Type: in vitro micronucleus test<br>Method: OECD Test Guideline 487<br>Result: negative<br>Remarks: Based on data from similar materials                 |

**Citric acid:**

|                       |   |                                                                                                                                                                    |
|-----------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative                                                                                             |
|                       |   | Test Type: in vitro micronucleus test<br>Result: positive                                                                                                          |
|                       |   | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative                                                                                             |
| Genotoxicity in vivo  | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative |

**Calcium dipropionate:**

|                       |   |                                                    |
|-----------------------|---|----------------------------------------------------|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) |
|-----------------------|---|----------------------------------------------------|

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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  
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 foetal development : Test Type: Embryo-foetal 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

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

**Citric acid:**

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

**Calcium dipropionate:**

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

**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

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**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****Toxicity****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                                                                                                                                                                                                                                                                        |

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Exposure time: 28 d  
Remarks: Based on data from similar materials

**Calcium bis(dihydrogenorthophosphate):**

Toxicity to fish : LC50 (*Oryzias latipes* (Japanese medaka)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: > 1,000 mg/l  
Exposure time: 3 h  
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

**Calcium (>70%) Salts Formulation**

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**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

**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

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**Section 13: Disposal considerations****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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**Section 14: Transport information****International Regulations****UNRTDG**

|                            |   |                |
|----------------------------|---|----------------|
| UN number                  | : | Not applicable |
| UN proper shipping name    | : | Not applicable |
| Transport hazard class(es) | : | Not applicable |
| Subsidiary risk            | : | Not applicable |
| Packing group              | : | Not applicable |
| Labels                     | : | Not applicable |
| Environmentally hazardous  | : | no             |

**IATA-DGR**

|                                          |   |                |
|------------------------------------------|---|----------------|
| UN/ID No.                                | : | Not applicable |
| UN proper shipping name                  | : | Not applicable |
| Transport hazard class(es)               | : | Not applicable |
| Subsidiary risk                          | : | Not applicable |
| Packing group                            | : | Not applicable |
| Labels                                   | : | Not applicable |
| Packing instruction (cargo aircraft)     | : | Not applicable |
| Packing instruction (passenger aircraft) | : | Not applicable |

**IMDG-Code**

|                            |   |                |
|----------------------------|---|----------------|
| UN number                  | : | Not applicable |
| UN proper shipping name    | : | Not applicable |
| Transport hazard class(es) | : | Not applicable |
| Subsidiary risk            | : | Not applicable |
| Packing group              | : | Not applicable |
| Labels                     | : | Not applicable |
| EmS Code                   | : | Not applicable |
| Marine pollutant           | : | Not applicable |

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**Special precautions for user**

Not applicable

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**Section 15: Regulatory information****Safety, health and environmental regulations specific for the product in question**

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

|                                                 |   |                |
|-------------------------------------------------|---|----------------|
| Environmental Protection and Management Act and | : | Not applicable |
|-------------------------------------------------|---|----------------|

Environmental Protection and Management (Hazardous Substances) Regulations

|                                                             |   |                |
|-------------------------------------------------------------|---|----------------|
| Fire Safety (Petroleum and Flammable Materials) Regulations | : | Not applicable |
|-------------------------------------------------------------|---|----------------|

## Calcium (&gt;70%) Salts Formulation

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**The components of this product are reported in the following inventories:**

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

**Section 16: Other information**

Revision Date : 13.08.2025

**Further information**

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

Date format : dd.mm.yyyy

**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; TECL - 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

**Calcium (>70%) Salts Formulation**

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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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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