

Safety Data Sheet



Revision Date 2023-12-29

Revision Number 9

1. Identification

Product identifier

Product Name 2 M Calcium Solution

Other means of identification

Product Code S1888

UN number or ID number UN3218

Synonyms No information available

Recommended use of the chemical and restrictions on use

Identified uses For research use only. Not for use in diagnostic procedures

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier

USA:

Takara Bio USA, Inc.

2560 Orchard Parkway

San Jose, CA 95131, USA

Phone: 800.662.2566/888.251.6618

Web: www.takarabio.com

Emergency telephone number

Emergency telephone In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

2. Hazard(s) identification

Product Classification Data

| | |
|-----------------------|-------------|
| Acute toxicity - Oral | Category 4 |
| Carcinogenicity | Category 1B |

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Danger

Hazard statements

Harmful if swallowed

May cause cancer

**Appearance** Clear, colorless**Physical state** Liquid**Odor** None**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/clothing and eye/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product

Precautionary Statements - Response

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

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity**Other information**

No information available.

3. Composition/information on ingredients

Substance

| Chemical name | CAS No. | Weight-% | Trade secret |
|-----------------|------------|----------|--------------|
| Calcium Nitrate | 10124-37-5 | 40 - 50 | * |

4. First-aid measures

Description of first aid measures

| | |
|-----------------------|--|
| General advice | Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. |
| Inhalation | Remove to fresh air. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician. |

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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

Personal precautions Ensure adequate ventilation.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear, colorless
Color No information available
Odor None
Odor Threshold No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH | No data available | None known |
| Melting point / freezing point | No data available | None known |
| Boiling point/boiling range (°C) | No data available | None known |
| Flash point | No data available | Open cup |
| Evaporation Rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | No data available | None known |
| Solubility in other solvents | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic Viscosity | No data available | None known |

Other information

Explosive properties No information available

| | |
|-----------------------------|--------------------------|
| Oxidizing properties | No information available |
| Softening point | No information available |
| Molecular weight | No information available |
| VOC content | No information available |
| Liquid Density | No information available |
| Bulk Density | No information available |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | No information available. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | None under normal processing. |
| Conditions to Avoid | None known based on information supplied. |
| Incompatible materials | None known based on information supplied. |
| Hazardous decomposition products | None known based on information supplied. |

11. Toxicological information

Information on likely routes of exposure

Product Information

| | |
|---------------------|--|
| Inhalation | Specific test data for the substance or mixture is not available. |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion | Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components). |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|-----------------|---------------------------|
| Symptoms | No information available. |
|-----------------|---------------------------|

Acute toxicity

Numerical measures of toxicity

Unknown acute toxicity

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------------------|---------------------|-------------|-----------------|
| Calcium Nitrate 10124-37-5 | = 302 mg/kg (Rat) | - | - |

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

| | |
|--|---------------------------|
| Skin corrosion/irritation | No information available. |
| Serious eye damage/eye irritation | No information available. |

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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

| Chemical name | ACGIH | IARC | NTP | OSHA |
|-------------------------------|-------|----------|-----|------|
| Calcium Nitrate 10124-37-5 | - | Group 2A | - | X |

Legend

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|-------------------------------|----------------------|---|----------------------------|-----------|
| Calcium Nitrate 10124-37-5 | - | LC50: =10000mg/L (96h, Lepomis macrochirus) | - | - |

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

| | |
|--|---|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging | Do not reuse empty containers. |
| California Hazardous Waste Status | This product contains one or more substances that are listed with the State of California as a hazardous waste. |

14. Transport information**DOT**

| | |
|--|---|
| UN number or ID number | UN3218 |
| Proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Special Provisions | 58, IB2, T4, TP1 |
| DOT Marine Pollutant | NP |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |
| Emergency Response Guide Number | 140 |

TDG

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Special Provisions | 55 |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |

MEX

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |
| Special Provisions | 223, 270 |

ICAO (air)

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |
| Special Provisions | A3, A65 |

IATA

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |
| Special Provisions | A3, A65, A803 |
| ERG Code | 5L |

IMDG

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |

| | |
|---------------------------|---|
| EmS-No. | F-A, S-Q |
| Special Provisions | 223, 270 |
| Marine pollutant | NP |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |

RID

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Classification code | O1 |
| Special Provisions | 270, 511 |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |

ADR

| | |
|-----------------------------------|--|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Classification code | O1 |
| Tunnel restriction code | (E) |
| Special Provisions | 511, 270 |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III, (E) |

ADN

| | |
|-----------------------------------|---|
| UN number or ID number | UN3218 |
| UN proper shipping name | Nitrates, inorganic, aqueous solution, n.o.s. |
| Transport hazard class(es) | 5.1 |
| Packing group | III |
| Classification code | O1 |
| Special Provisions | 270, 511 |
| Description | UN3218, Nitrates, inorganic, aqueous solution, n.o.s., 5.1, III |
| Equipment Requirements | PP |

15. Regulatory information

International Inventories

| | |
|----------------------|----|
| TSCA | -. |
| DSL/NDSL | -. |
| EINECS/ELINCS | -. |
| ENCS | -. |
| IECSC | -. |
| KECL | -. |
| PICCS | -. |
| AICS | -. |

Legend:

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name | SARA 313 - Threshold Values % |
|------------------------------|-------------------------------|
| Calcium Nitrate - 10124-37-5 | 1.0 |

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|-------------------------------|------------|---------------|--------------|
| Calcium Nitrate 10124-37-5 | X | - | - |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

| |
|------------------------------|
| 16. Other information |
|------------------------------|

| | | | | |
|-----------------------------------|----------------------------------|-----------------------|---------------------------|------------------------------|
| NFPA | Health hazards 2 | Flammability 0 | Instability 0 | Special hazards - |
| HMIS | Health hazards * 2 | Flammability 0 | Physical hazards 0 | Personal protection X |
| <i>Chronic Hazard Star Legend</i> | <i>* = Chronic Health Hazard</i> | | | |

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------|------|---------------------------|
| TWA | Time weighted average | STEL | Short term exposure limit |
| Ceiling | Maximum limit value | * | Skin designation |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal

Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 2023-12-29
Revision Note No information 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