

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
Product Identifier

| | |
|-----------------------------|-------------------------|
| Perihalan Produk: | Calcium shot |
| Product Description: | Calcium shot |
| Cat No. : | 10127 |
| Synonyms | Calcium Metal.; Calciat |
| CAS No | 7440-70-2 |
| Molecular Formula | Ca |

Relevant identified uses of the substance or mixture and uses advised against

| | |
|-----------------------------|--------------------------|
| Recommended Use | Laboratory chemicals. |
| Uses advised against | No Information available |

Company

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,
 Selangor Darul Ehsan, Malaysia.
 Main line: +60 3-5525 7888

Supplier

| | |
|-----------------------|-----------------------------|
| E-mail address | Enquiry.my@thermofisher.com |
|-----------------------|-----------------------------|

Emergency Telephone Number

Tel: +03-5525 7888
 CHEMTREC Malaysia **1-800-815-308** (Malay)
 CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

SECTION 2: HAZARDS IDENTIFICATION
Classification of the substance or mixture

| | |
|--|-------------------|
| Substances/mixtures which, in contact with water, emit flammable gases | Category 2 (H261) |
|--|-------------------|

Label Elements

Signal Word
Danger
Hazard Statements

H261 - In contact with water releases flammable gases

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Precautionary Statements

Prevention

P231 + P232 - Handle and store contents under inert gas. Protect from moisture

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water

Storage

P402 + P404 - Store in a dry place. Store in a closed container

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|-----------|-----------|----------|
| Calcium | 7440-70-2 | 99 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if symptoms occur.

Ingestion

Clean mouth with water. Get medical attention.

Inhalation

Remove from exposure, lie down. Remove to fresh air.

Self-Protection of the First Aider

No special precautions required.

Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Extinguishing media which must not be used for safety reasons

Water.

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Special hazards arising from the substance or mixture

Water reactive. Produce flammable gases on contact with water.

Hazardous Combustion Products

Hydrogen, Calcium oxides.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Do not expose spill to water. Do not let this chemical enter the environment.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Do not allow contact with water. Avoid contact with skin and eyes. Avoid contact with skin and clothing. Do not ingest. If swallowed then seek immediate medical assistance. Protect from moisture.

Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Protect from moisture. Keep from any possible contact with water.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Controls

Engineering Measures

None under normal use conditions.

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Personal protective equipment

| | |
|---------------------------------|--|
| Eye Protection | Goggles |
| Hand Protection | Protective gloves |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

| | |
|---------------------------------|--|
| Respiratory Protection | No special protective equipment required |
| Recommended Filter type: | Particulates filter conforming to EN 143 |

| | |
|--------------------------------|---|
| <u>Hygiene Measures</u> | Handle in accordance with good industrial hygiene and safety practice |
|--------------------------------|---|

| | |
|---|--------------------------|
| <u>Environmental exposure controls</u> | No information available |
|---|--------------------------|

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | |
|-------------------------------------|--------------------------|--|
| Appearance | Grey | |
| Physical State | Solid | |
| Odor | Odorless | |
| Odor Threshold | No data available | |
| pH | 14 | |
| Melting Point/Range | 845 °C / 1553 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 1484 °C / 2703.2 °F | @ 760 mmHg |
| Flash Point | No information available | Method - No information available |
| Evaporation Rate | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Vapor Pressure | No data available | |
| Vapor Density | Not applicable | Solid |
| Specific Gravity / Density | No data available | |
| Bulk Density | No data available | |
| Water Solubility | Reacts with water | |
| Solubility in other solvents | No information available | |

Partition Coefficient (n-octanol/water)

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| | | |
|---------------------------|--------------------------|-------|
| Autoignition Temperature | No data available | |
| Decomposition Temperature | No data available | |
| Viscosity | Not applicable | Solid |
| Explosive Properties | No information available | |
| Oxidizing Properties | No information available | |

| | |
|-------------------|-------|
| Molecular Formula | Ca |
| Molecular Weight | 40.07 |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Yes.
Reacts violently with water.

Chemical Stability

Moisture sensitive.

Possibility of Hazardous Reactions

| | |
|--------------------------|---------------------------|
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | No information available. |

Conditions to Avoid

Incompatible products. Exposure to moist air or water.

Incompatible Materials

Acids. Strong oxidizing agents. Alcohols. Ammonia. Halogens. oxygen.

Hazardous Decomposition Products

Hydrogen. Calcium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

| | |
|---------------------|---|
| Product Information | No acute toxicity information is available for this product |
|---------------------|---|

| | |
|---------------------|-------------------|
| (a) acute toxicity; | |
| Oral | No data available |
| Dermal | No data available |
| Inhalation | No data available |

| | |
|--------------------------------|-------------------|
| (b) skin corrosion/irritation; | No data available |
|--------------------------------|-------------------|

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(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available

Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects, both acute and delayed No information available.

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects Reacts with water so no ecotoxicity data for the substance is available. Do not empty into drains.

Persistence and degradability

Persistence Persistence is unlikely, based on information available.
Degradability Not relevant for inorganic substances, Reacts with water.
Degradation in sewage Water reactive.
treatment plant

Bioaccumulative potential Product does not bioaccumulate due to reaction with water

Mobility in soil Reacts with water. Is not likely mobile in the environment.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

Other adverse effects No information available

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used Do not empty into drains Solutions with high pH-value must be neutralized before discharge

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

UN-No UN1401
Hazard Class 4.3
Packing Group II
Proper Shipping Name CALCIUM

Road and Rail Transport

UN-No UN1401
Hazard Class 4.3
Packing Group II
Proper Shipping Name CALCIUM

IATA

UN-No UN1401
Hazard Class 4.3
Packing Group II
Proper Shipping Name CALCIUM

Special Precautions for User

No special precautions required

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

X = listed

| Component | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | IECSC | AICS | KECL |
|-----------|-----------|------|-----|-------|------|------|-------|------|----------|
| Calcium | 231-179-5 | X | X | X | X | | X | X | KE-04462 |

National Regulations

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

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SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Prepared By

Revision Date

Revision Summary

Health, Safety and Environmental Department

25-Mar-2025

Not applicable.

In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Disclaimer

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End of Safety Data Sheet