

Safety Data Sheet

MEDIPRO SHIELD

Section 1 — Identification of the Product / Company

1.1 Identification of the Product

Identified Product: MEDIPRO SHIELD
Chemical Name: Calcium Hypochlorite
CAS No.: 7778-54-3
Product Form: Granules

1.2 Product Uses

- Institutional surface disinfectant
- Hospital floor disinfection
- Environmental surface sanitation

1.3 Identification of the Company / Undertaking

Manufacturer / Supplier: JAL AQUA INTERNATIONAL LLP
Plot No. 620, Road No. 6, Beside PETL GIDC, Panoli, Ankleshwar, Gujarat 394115, India.

1.4 Emergency Contact Details

JAL AQUA INTERNATIONAL LLP
Tel: +91-81606 70552 , +91-96624 81009
Email: tarang@jalaquainternational.com
Website: www.jalaquainternational.com

Section 2 — Hazard Identification

2.1 Classified as dangerous per the Globally Harmonized System of Classification and Labelling of Chemicals — GHS (Rev. 8) (2019).

2.1.1 Physical Hazard Classifications

- Oxidizing Solids — Category 2 — May intensify fire; oxidizer.

2.1.2 Health Hazard Classifications

- Acute Oral Toxicity — Category 4 — Harmful if swallowed.
- Acute Inhalation Toxicity — Category 4 — Harmful if inhaled.
- Skin Corrosion / Irritation — Category 1B — Causes severe skin burns.
- Serious Eye Damage / Eye Irritation — Category 1 — Causes serious eye damage.
- Specific Target Organ Toxicity (Single Exposure) — Category 3 — Causes respiratory tract irritation (RTI).

2.1.3 Environmental Hazard Classifications

- Short-Term (Acute) Aquatic Hazards — Category Acute 1 — Very toxic to aquatic life.
- Long-Term (Chronic) Aquatic Hazards — Category Chronic 1 — Very toxic to aquatic life with long-lasting effects.

2.2 Labelling in Accordance with GHS (Rev. 8) (2019)

Hazard Pictograms: GHS03, GHS05, GHS07, GHS09



Signal Word: DANGER

2.2.3 Hazard Statements (H-codes)

- H272 — May intensify fire; oxidizer.
- H302 — Harmful if swallowed.
- H314 — Causes severe skin burns and eye damage.
- H335 — May cause respiratory irritation (harmful if inhaled).
- H410 — Very toxic to aquatic life with long-lasting effects.

2.2.4 Precautionary Statements (P-codes)

- P102 — Keep out of reach of children.
- P210 — Keep away from heat / sparks / open flames / hot surfaces. No smoking.
- P220 — Keep away from clothing and other combustible materials.
- P260 — Do not breathe dust and gas.
- P264 — Wash hands, eyes, face and any other contacted body part thoroughly after handling.
- P270 — Do not eat, drink or smoke when using this product.
- P271 — Use only outdoors or in a well-ventilated area.
- P280 — Wear protective gloves / protective clothing / eye protection / face protection.

2.2.4.1 Response

- P301 + P330 + P331 — IF SWALLOWED: Rinse mouth. Do not induce vomiting.
- P302 + P361 + P354 — IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
- P304 + P340 — IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305 + P354 + P338 — IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing.
- P306 + P363 — IF ON CLOTHING: Wash contaminated clothing before reuse.
- P337 + P316 — If eye irritation persists: Get emergency medical help immediately.
- P319 — Get medical help if you feel unwell.
- P370 + P378 — In case of fire: Use the firefighting measures in Section 5 for extinction.

2.2.4.2 Storage

- P403 + P233 — Store in a well-ventilated place. Keep container tightly closed.
- P405 — Store locked up.
- P420 — Store separately.

2.2.4.3 Disposal

- P501 — Dispose of contents / container in accordance with local / regional / national / international regulations.

Section 3 — Composition / Information on Ingredients

Chemical Name: Calcium Hypochlorite

CAS No.: 7778-54-3

Chemical Formula: Ca(OCl)₂

EC No.: 231-908-7

Section 4 — First-Aid Measures

4.1 Description of Necessary First-Aid Measures

Inhalation: Take the victim to fresh air. Remove all contaminated clothes. Rest until fully recovered. If breathing is difficult, seek medical advice immediately.

Skin Contact: Wash skin and hair thoroughly in running water for 15 minutes. Remove all contaminated clothes. Seek medical assistance if skin irritation, blisters, redness or swelling occurs. Do not reuse clothes before thorough washing.

Eye Contact: Immediately wash eyes with running fresh water for 15 minutes. Wash under the eyelids and clean thoroughly. Remove contact lenses if present after the initial 5 minutes and continue rinsing. Seek medical advice immediately.

Ingestion: Thoroughly clean the mouth with water. Do not induce vomiting. Drink a few glasses of water and consult a doctor immediately.

4.2 Most Important Symptoms / Effects

Inhalation: Irritation in nose, coughing, runny nose, headache, breathing difficulties and sore throat.

Skin Contact: Irritation, redness on contacted area. May cause dermatitis, blisters or swelling on prolonged exposure.

Eye Contact: Causes serious irritation, redness, burning sensation, pain, infection.

Ingestion: Respiratory tract irritation, sore throat, nausea, vomiting. May cause ulcers, inflammation and burning in the oesophagus or stomach.

4.3 Indication of Immediate Medical Attention

Treat as per the visible symptoms.

Section 5 — Fire-Fighting Measures

5.1 Suitable Extinguishing Media: Spray large quantities of water.

5.2 Specific Hazards

Presence of the product may intensify fire and increase the burning rate of other materials. The product emits toxic fumes of chlorine in fire. Upon decomposition, the product emits white fumes.

5.3 Special Protective Actions for Fire-Fighters

Keep intact containers cool by spraying water on them and move them away from the fire into open air. On temperature rise the product decomposes, leading to expansion inside the container and possible explosion. Avoid spraying water directly on exposed or damaged containers. Wear protective suits with oxygen supply to avoid exposure to chlorine gas; cover the full body to avoid chemical exposure.

Section 6 — Accidental Release Measures

6.1 Personal Precautions, PPE and Emergency Procedure

Keep unprotected people away from the spill. Equip protective equipment as per Section 8. Do not let the product touch eyes, skin or clothes. Avoid breathing the dust / chlorine. Ensure adequate ventilation, do not smoke, and keep the product away from any ignition source. For large spills, contact emergency services promptly.

6.2 Environmental Precautions

Prevent the spill from entering waterways, sewers and drains. Do not let water touch the spill. The material is very toxic to aquatic life and causes long-lasting effects. Monitor chlorine levels and pH in water before discharge.

6.3 Containment and Cleaning Up

Dry spills: Use a brush, plastic broom or plastic shovel to collect the spill into a separate HDPE container. Use non-sparking tools. Avoid metal containers. Avoid mixing the spill with any other chemical; use soil as an absorbent to reduce the chemical effect.

Wet spills: Collect carefully with protective equipment into separate open-top HDPE containers and wait for the spill to neutralise before disposal. May also be neutralised by adding into a very large volume of water in a fibre tank. Mark and label the contaminated containers.

Section 7 — Handling and Storage

7.1 Precautions for Safe Handling

Wear all necessary PPE. Cover eyes, skin and mouth / nose to minimise exposure as advised in Section 8. Handle using dry plastic tools. Do not add water into the product — add product to large quantities of water only. Do not mix with any other chemicals. Eating, drinking and smoking are prohibited in the storage area. Wash hands, eyes and contacted surfaces thoroughly after use.

7.2 Conditions of Safe Storage, Including Incompatibilities

Store in a cool, dry, well-ventilated place. Avoid direct sunlight. Keep out of reach of children. Avoid storage around flammable chemicals and away from electrical equipment that can spark. Store only in original containers. Keep the container tightly closed to minimise release. Re-tie the liner bag inside the container after each use.

Section 8 — Exposure Controls / Personal Protection

8.1 Control Parameters (Regulatory Exposure Limits)

- Calcium Hypochlorite — NIOSH REL guidelines (37–48 mg/m³).
- Chlorine — NIOSH REL guidelines, C 0.5 ppm (1.45 mg/m³) [15-minute].

8.2 Appropriate Engineering Controls

Keep the storage area well-ventilated and open. Use local exhaust ventilation in high humidity or high temperature. Ensure an eye-washer and safety shower are available.

8.3 Individual Protection Measures (PPE)

Eye / Face: Protective chemical glasses that do not allow air to pass. Keep a safety eye-washer / shower for emergency use.

Skin: Full-body protective clothing or industrial coveralls. Impervious gloves and protective boots. Reuse only after thorough washing.

Respiratory: Wear an N95 mask to keep dust particles out of the respiratory tract.

Thermal Hazard: Where fumes are produced, wear a fire-protective suit covering the whole body, fire-protective glasses, acid-gas cartridges with N95 filters, and protective boots.

Protection Type: PVC, Butyl, Natural rubber or Nitrile for gloves, boots and apron / suit.

Section 9 — Physical and Chemical Properties

Physical State / Appearance: Granular solids

Colour: White

Odour: Chlorine

Melting Point: 100 °C

Boiling Point: Not Available
Flammability: Not Available
Flammability Limit: Not Available
Flash Point: Not Available
Relative Vapour Density: Not Available
Auto-Ignition Temperature: Not Available
Decomposition Temperature: 177 °C
pH: 10.4–10.8 (1% aq. solution)
Kinematic Viscosity: Not Available
Solubility: 21 g/100 mL in water
Partition Coefficient (n-octanol/water): Not Available
Vapour Pressure: Not Available
Density: 2.35 ± 0.1 g/cm³
Particle Characteristics: Not Available

Section 10 — Stability and Reactivity

- 10.1 Reactivity:** Contact with acids liberates toxic gas. Contact with organic matter may cause fire.
- 10.2 Chemical Stability:** Stable if stored as per Section 7 conditions.
- 10.3 Possibility of Hazardous Reactions:** May intensify and support combustion. A strong oxidising agent. Emits toxic fumes of chlorine gas; on decomposition emits white fumes.
- 10.4 Conditions to Avoid:** Heat, flame, moisture, incompatible materials, sparks and ignition sources.
- 10.5 Incompatible Materials:** Acids, water, petroleum products and combustible materials. Alkali metals, alcohol, ammonium compounds, nitrogen compounds, reducing agents.
- 10.6 Hazardous Decomposition Products:** Chlorine; carbon monoxide if burning.

Section 11 — Toxicological Information

Acute Toxicity — MEDIPRO SHIELD (Calcium Hypochlorite)

- LD50 Oral: 850 mg/kg (Rat)
- LD50 Dermal: > 2000 mg/kg (Rabbit)
- LC50 Inhalation (nose): > 2.04 mg/L (Rat, 1h); > 0.51 mg/L (Rat, 4h)

Oral toxicity: (GHS Cat 4) Harmful if swallowed. May cause respiratory tract irritation, sore throat, nausea, vomiting; ulcers, inflammation and burning in the oesophagus or stomach.

Inhalation toxicity: (GHS Cat 4) Harmful if inhaled. Irritation in nose, coughing, runny nose, headache, breathing difficulties and sore throat.

Skin irritation: (GHS Cat 1B) Causes skin damage / irritation, blisters, redness or swelling.

Serious eye irritation: (GHS Cat 1) Causes eye damage, burns to eyelids, conjunctivitis, corneal oedema, redness, burning, pain, infection.

STOT — single exposure: (GHS Cat 3) May cause respiratory irritation; irritant to the mucous membranes of the respiratory tract.

Sensitisation / Mutagenicity / Carcinogenicity / Reproductive / STOT-repeated / Aspiration: No data available.

Section 12 — Ecological Information

Very toxic to aquatic life with long-lasting effects. Irregular dosing or spill releases chlorine on mixing with water and harms aquatic life. May deteriorate at high temperatures, releasing chlorine. Biodegradable by nature; does not persist in the open environment for long. Chlorine dissipates in the environment and other components react rapidly to complete decomposition. Hydrolysis produces chlorine; non-bioaccumulative.

Section 13 — Disposal Considerations

Consult local waste-management authority for disposal of contents and containers. Comply with local / regional / international regulations. Do not dispose into sewers, drains or water bodies. Wash and dry the container prior to disposal.

Section 14 — Transport Information

UN Number: UN 2880
UN Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED
Transport Hazard Class: 5.1
Packing Group: II
Environmental Hazards: Marine Pollutant (Yes)

Emergency Response Guidebook No.: 140

Applies to IATA, IMDG/IMO, DOT and TDG.

Section 15 — Regulatory Information

EU Regulations:

Chemical Name: Calcium Hypochlorite

CAS No.: 7778-54-3

EINECS: 231-908-7

Refer to Section 2 for hazard details.

Section 16 — Other Information

Source of data: United Nations (2019). Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 8th revised ed. Chlorine | NIOSH | CDC (2018).

Disclaimer

This SDS is prepared by Jal Aqua International LLP to the best of its knowledge from verified technical and literature sources as of the issue date. Jal Aqua International LLP cannot control or foresee how the product is used; everyone accessing the product must be aware of the risks and take required precautions. Contact Jal Aqua International LLP for any information regarding this SDS. The SDS applies to direct users of the product and is not valid if the product is used for mixing with other substances or chemicals.

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END OF SDS