

MATERIAL SAFETY DATA SHEET

Stable Bleaching Powder Calcium Hypochlorite

1. IDENTIFICATION

Trade Marks and Synonyms	Stable Bleaching Powder, Calcium Oxychloride, Calcium hypochlorite
Chemical Names and	Calcium Hypochlorite
Synonyms Physical Form	White Powder having characteristic chlorine odour
Molecular Formula	$\text{Ca}(\text{OCl})_2$

2. INFORMATION OF MAJOR INGREDIENTS

Chemical Name	Calcium Hypo chlorite
CAS No	7778-54-3
Formula	$\text{Ca}(\text{OCl})_2$

3. HAZARD IDENTIFICATION

Main Risk	Contact with combustible material may cause fire
Contact with skin	Causes irritation, on contact for small duration
Contact with eyes	Causes irritation
Safety Phrases	Keep out of reach of children. In case of contact with skin, wash immediately with plenty of water.

4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	Powder, White solid with odour of chlorine
pH	11.5 (5% solution)
Chlorine Content	Min. 35% m/m
Bulk Density	0.8 – 1.2 gm/cc at 20 °C
Boiling Point	Not applicable
Melting Point	Decomposes at temperature above 100 °C
Flash Point	Not applicable
Auto Ignition	Not applicable
Flammable Limit	Not Applicable
Vapour Pressure (mm Hg)	Not Applicable
Solubility in Water	23.4 gm/100 ml water at 40 °C
Solubility in Organic Solvents	Not Known
Oxidizing /Explosive Properties	Strong Oxidizer , so it has serious fire and explosion risks

5. STABILITY AND REACTIVITY

Stability	Normally unstable (losses available chlorine by 2% on heating above 100 °C)
Conditions to avoid	Excessive heat and moisture.
Material to avoid	Acids, organic compounds, metal oxides, ammonia, urea & amines etc.
Reactivity	
Air	Releases chlorine gas.
Water	A risk of explosion or toxic gas formation
Acids	Highly reactive with a risk of explosion & toxic gas formation
Alkalis	Reactive.

Hazardous Decomposition Products

Nascent Oxygen, Chlorine, Calcium chlorate

6. **TOXICITY DATA**

Routes of Entry

In contact with skin

Solution can cause chemical burns

In contact with eyes

Dust can cause eye irritation

Inhalation

Dust may irritate nose, throat & upper respiratory tract

Ingestion

May cause burns to the mouth & digestive tract

Toxicity Data

LD₅₀ (Rats, Oral) 805 mg/kg

LD₅₀ (Rabbit, Dermal) >2000 mg/kg

Chronic Toxicity

Not Available

Carcinogenic Toxicity

No data available

Mutagenic Toxicity

Studies for mutagenicity were negative.

Reproductive Toxicity

No information is available.

Ventilation Requirements

Adequate ventilation required

Respiratory Protection

Anti dust mask & respirator with acid cartridge for chlorine

Eye Protection

Goggles or full-face mask.

7. **FIRST AID MEASURES**

Skin Contact

Remove contaminated clothing and wash affected area with sufficient quantity of water for 15-20 minutes & obtain medical advice immediately

Eye Contact

Immediately flush eyes thoroughly for at least 15 minutes with running water. Hold eyelids open during flushing. If irritation persists, repeat flushing. Seek medical attention.

Inhalation

Move the victim to fresh air, obtain medical attention .In case of respiratory failure provide artificial respiration

Ingestion

Have victim rinse mouth thoroughly with water & drink plenty of water to dilute the material in stomach. If spontaneous vomiting occurs, make victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Obtain medical attention immediately.

Further Medical Advice

Seek medical attention

8. **FIRE AND EXPLOSION HAZARD DATA**

Fire Extinguishing Media	Water Heating will emit fumes. Water spray, foam, carbon dioxide or dry powder may be used. Keep containers cool with copious amounts of water.
Would any material saturated with this product be subject to spontaneous combustion?	Yes
Fire Fighting Protective Equipment	Wear full protective clothing, goggles & mask suitable for chlorine gas.
Unusual Fire and Explosive Hazards	During a fire in which this material is involved, emits toxic fumes of HCl.

9. **PERSONAL PROTECTION**

General Precautions	Eye and skin protection should be used when Handling SBP
---------------------	--

10. **HANDLING AND STORAGE**

Handling	Store in a well ventilated area. Keep containers closed. Keep away from heat, sparks and flames. Use only with adequate ventilation. Avoid generating dust & breathing vapour. Avoid contact with eyes, skin or clothing..
Storage	Store in tightly closed containers in a cool, dry & well-ventilated place. Keep away from sunlight and combustible materials. Always keep the bag on wooden pallets.

11 **SPILLAGE/ACCIDENTAL RELEASE**

Spillage	Do not touch spilled material. Prevent it entering sewers. Dry manual lifting of the spilled material is suggested.
Personal Precautions	Avoid generation of dust. Avoid Eyes & Skin Contact. Avoid Inhalation. Avoid Ingestion. Wear appropriate personal protective equipments.
Environmental Precautions	Prevent contamination of soil and water. Prevent from spreading or entering into sewers or confined spaces.

12 **WASTE DISPOSAL**

Waste Disposal

Untreated SBP waste must never be discharged directly in to sewers.
Review National/Regional Regulations.
Packing materials gets contaminated & can be disposed off by appropriate methods in accordance with National / Regional requirement.

13. **ENVIRONMENTAL INFORMATION**

Bio - Accumulation

Not determined

Biodegradability

This material is inorganic and does not subject to biodegradation.

Toxicity

Non-toxic

Mobility

No

Behaviour in Sewage

Improves sewage quality

14. **REGULATORY INFORMATION**

Danger Symbol

- O Oxidizing
- C Corrosive
- N Dangerous for the environment

Risk Phrases

R40/R20/R22: Harmful: possible risk of irreversible effects if swallowed.
R36: Irritating to eyes
R8: Contact with combustible material may cause fire.
R50/53: Very toxic to aquatic organisms, may cause long term adverse effects
R31: Contact with acid liberates toxic gas
R34: Causes burns

Safety Phrases

S2: Keep out of the reach of children.
S24/25: Avoid contact with skin and eyes.
S23: Do not breathe gas/fumes/vapour/spray.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately and show the label where possible
S61: Avoid release to the environment

15. TRANSPORT INFORMATION

UN No. & Symbols	2208, “ Oxidizing Substance”
EC No:	231-908-7
Road /Rail Transport	Not Known
Air Transport	Not Known

16. OTHER INFORMATION

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 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.

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and neither it is to be considered a warranty or quality specification, nor as a binding statement on contractually agreed product qualities. Company does not take any guarantee or legal liability expressed or implied under any circumstances in respect of the adequacy of this document for any particular purpose.