



## Material Safety Data Sheet

### Barium Perchlorate, Trihydrate

#### SECTION 1.1 – PRODUCT IDENTIFICATION

<b>Product Name</b>	:	Barium Perchlorate, Trihydrate
<b>Molecular Formula</b>	:	Ba(ClO <sub>4</sub> ) <sub>2</sub>
<b>Molecular Weight</b>	:	336.27 g/mole
<b>CAS No.</b>	:	13-46-5

#### SECTION: 1.2 – COMPANY IDENTIFICATION

**Company Name:** Indenta Chemicals (India) Pvt. Ltd.

**Address:** 117, The Summit Business Bay, Opp Cinemax, Off. Sir M.V. Road, Near WEH Metro Station, Andheri (E), Mumbai 400 093, India

**Telephone #:** +91-22-26849600

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#### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS #	% by Weight
Barium Perchlorate, Trihydrate	13-46-5	100

**Toxicological Data on Ingredients:** Barium Perchlorate, trihydrate LD50: Not available. LC50: Not available

#### SECTION 3: HAZARD IDENTIFICATION

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.

**Potential Chronic Health Effects:** CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, the nervous system, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

#### SECTION 4: FIRST AID MEASURES

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing

before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

## SECTION 5: FIRE AND EXPLOSION DATA

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**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Some metallic oxides.

**Fire Hazards in Presence of Various Substances:** combustible materials, organic materials.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

**Special Remarks on Fire Hazards:** Contact with combustible or organic materials may cause fire.

**Special Remarks on Explosion Hazards:** Not available.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:** Oxidizing material. Poisonous solid. Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substances damp using water spray. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

## SECTION 7: HANDLING AND STORAGE

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**Precautions:** Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

## SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

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**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**Physical state and appearance:** Solid. (Crystals solid. Deliquescent crystals solid.)

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** 336.27 g/mole

**Color:** White.

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** Not available.

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, acetone.

**Solubility:** Soluble in cold water, hot water, acetone, alcohol.

## SECTION 10: STABILITY AND REACTIVITY

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**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:** Reactive with reducing agents, combustible materials, organic materials.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Strong oxidizer. Incompatible with combustible materials, and most organic materials.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

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**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:** May cause damage to the following organs: kidneys, the nervous system, central nervous system (CNS).

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:**

**Acute Potential Health Effects:** Skin: It can cause skin irritation. Eyes: It can cause eye irritation. Inhalation: It can cause

respiratory tract (nose and throat) irritation. Ingestion: Ingestion of large amounts can cause abdominal pain, vomiting, nausea, and diarrhea. It may affect behavior/central nervous/nervous system (tremors and muscle twitching, vertigo, dizziness, seizures, paralysis,coma), respiration (dyspnea, cyanosis, tachypnea), and cardiovascular system (hypertension or hypotension, rapid or slow pulse, bradycardia or tachycardia, dysrhythmia), liver (jaundice, enlarged liver, elevated liver function tests), blood (methemoglobinemia, thrombocytopenia, hemolytic anemia, leukocytosis), and metabolism (metabolic acidosis, hyperkalemia). Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect the kidneys.

## SECTION 12: ECOLOGICAL INFORMATION

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**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## SECTION 13: DISPOSAL CONSIDERATION

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### **Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## SECTION 14: TRANSPORT INFORMATION

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### **DOT Classification:**

CLASS 5.1: Oxidizing material. CLASS 6.1: Poisonous material.

**Identification:** Barium Perchlorate UNNA: 1447 PG: II

**Special Provisions for Transport:** Not available.

## SECTION 15: OTHER REGULATORY INFORMATION

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### **Federal and State Regulations:**

TSCA 8(b) inventory: Barium Perchlorate, anhydrous SARA 313 toxic chemical notification and release reporting: Barium Perchlorate, anhydrous

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

### **Other Classifications:**

#### **WHMIS (Canada):**

**CLASS C:** Oxidizing material. CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

**DSCL (EEC):** R8- Contact with combustible material may cause fire. R20/22- Harmful by inhalation and if swallowed.

R36/38- Irritating to eyes and skin. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S46- If swallowed, seek medical advice immediately and show this container or label.

#### **HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** E

#### **National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 1

**Specific hazard:**

**Protective Equipment:** Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## SECTION 16: ADDITIONAL INFORMATION

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