# Material Safety Data Sheet

**Chlorine Powder** (RXSOL-33-3028-025)

## 1. Product and Company Identifaction

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|---|---|
| Product Name | RXSOL-33-3028-025 |
| Product Type | Chlorine Powder |

Company Details:

**RX MARINE INTERNATIONAL**
**105, A wing , BSEL , TECH PARK.**
**VASHI ,NEW BOMBAY 400703 INDIA**

**Stock Point : Mumbai, Kandla, Chennai, Visakhapatnam, Kolkata, Fujairah, Oman, Kenya, Canada**

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|---|---|
| Phone | +91 22 27815541 / 42 |
| Fax | +91 22 2781 1318 :::AOH :0091 9821214367 |
| Email | care@rxmarine.com |


## 2. Composition / informationon ingredients

| Hazardous Ingredients | % by Weight | Cas No. |
|---|---|---|
| Calcium Hypochlorite | 60-80% | 7778-54-3 |
| Sodium Chloride | 10-20% | 7647-14-5 |
| Calcium Chloride | 0-5% | 10043-52-4 |
| Calcium Hydroxide | 0-4% | 1305-62-0 |
| Calcium Carbonate | 0-5% | 471-34-1 |
| Calcium Chlorate | 0-5% | 10137-74-3 |
| Water | 5.5-10% | 7732-18-5 |

## 3. Hazards Identification

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| Inhalation | Dust and mist irritate the nose and throat. In confined areas, mechanical agitation can result in high levels of dust, and reaction with incompatibles materials (e.g., acids and water/moisture) can result in high concentrations of chlorine vapour, either of which may result in burns to the respiratory tract, producing lung edema, shortness of breath, wheezing, choking, chest pains, impairment of lung function, and possible permanent lung damage. |
| Skin Contact / Absorption | Chlorine dust and solutions can cause irritation and in severe cases, chemical burns, which are characterized by redness, swelling, and scab formation. Moisture from perspirations will accelerate tissue destruction. |
| Eye Contact | Exposure to chlorine powder can cause eye irritation and vision impairment. Contact can produce impairment of vision and corneal damage. |
| Ingestion | When ingested, there will be burning of the mouth and throat. Can cause abdominal cramps, vomiting, diarrhea, nausea, and/or tissue ulceration which may lead to convulsions, coma, and even death. |
| Exposure Limits | Ceiling= 3mg/m3 as chlorine (manufacturer's internal standard) |

## 4. First Aid Measures

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| Inhalation | Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention. |
| Skin Contact / Absorption | Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists. |
| Eye Contact | Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention. |
| Ingestion | Immediately give large amounts of water. Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomitus. Do not give anything by mouth to an unconscious or convulsing person.<br>Seek immediate medical attention. |
| Additional Information | Not available |

## 5. Fire-fighting Measures

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| Conditions of Flammability | Non-flammable. Note chlorine powder is a strong oxidizing agent; may form explosive mixtures with combustibles, organic, or other oxidizable materials. |
| Means of Extinction | Drench with water, and cool surrounding products and area with water. Avoid dry extinguishers containing ammonium compounds. |
| Flash Point | Not Applicable |
| Auto-ignition Temperature | Not Applicable |
| Upper Flammable Limit | Not Applicable |
| Lower Flammable Limit | Not Applicable |
| Hazardous Combustible Products | Chlorine, oxygen, and chlorine monoxide at higher temperatures. Water in contact with hot chlorine powder can release hydrochloric acid or chlorine gas. |
| Special Fire Fighting Procedures | Wear NIOSH-approved self-contained breathing apparatus and protective clothing. |
| Explosion Hazards | Not sensitive to mechanical impact or static discharge. |

## 6. Accidental Release Measures

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| Leak / Spill. | Wear appropriate personal protective equipment. Ventilate area. Stop or reduce leak if safe to do so. Prevent material from entering sewers. Flush with water to remove any residue. . |
| Deactivating Materials | Not available |

## 7. Handling and Storage

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| Handling Procedures | Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. |
| Storage Requirements | Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials. Keep out of the sun. . |

## 8. Exposure controls and personal protection

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| Protective Equipment | |
| Eyes | Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury. |
| Respiratory | Use NIOSH-approved respirator - full facepiece with chlorine and dust/mist cartridges when dust is present. Use a self-contained breathing apparatus should be used for major spills |
| Gloves | Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. |
| Clothing | Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse |
| Footwear | Impervious boots of chemically resistant material should be worn at all times |
| Engineering Controls | |
| Ventilation Requirements | Mechanical ventilation (dilution or local exhaust), process or personnel enclosure, and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems |
| Other | Emergency shower and eyewash should be in close proximity |

## 9. Physical and chemical properties

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| Physical State | Solid |
| Odor and Appearance | White, TABLET solid with a strong chlorine odour |
| Odor Threshold | ~ 1.4 mg/m3 based on chlorine |
| Specific Gravity (Water=1) | Specific Gravity (Water=1) |
| Vapor Pressure (mm Hg, 20C) | not applicable |
| Vapor Density (Air=1) | Not available. |
| Evaporation Rate | Not available. |
| Boiling Point | not applicable |

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| Freeze/Melting Point | Decomposes at 170-180°C |
| pH | 10.4-10.8 (1% solution) |
| Water/Oil Distribution Coefficient | Not applicable |
| Bulk Density | 0.8 g/cm3 |
| % Volatiles by Volume | Not available |
| Solubility in Water | 18% at 25°C |
| Molecular Formula | Ca(OCl)2 |
| Molecular Weight | 142.98 |

## 10. Stability and reactivity

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| Stability | Stable in optimum storage conditions. Heat, sunlight and contamination could cause decomposition |
| Incompatibility | Acids, reducing agents, combustible materials such as wood, cloth, or organic materials, dry powder fire extinguishers containing monoammonium phosphate, metals such as iron and copper and their alloys, water or steam, ammonia, urea, amines |
| Hazardous Products of Decomposition | Water in contact with chlorine powder releases chlorine gas. Contact with incompatibles presents an explosion and fire hazard. Toxic or corrosive fumes may be liberated. These include chlorine gas |
| Polymerization | Will not occur |

## 11. Toxicological information

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| Irritancy | Causes irritation and burns to eyes and skin |
| Sensitization | Not available |
| Chronic/Acute Effects | Skin irritation may occur from repeated or prolonged skin contact. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. Asthma, respiratory and cardiovascular disease may be aggravated by exposure to this chemical |
| Synergistic Materials | Not available |

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| Animal Toxicity Data | LC50(inhalation,rat,1 hour)= 1300mg/m3 based on chlorine<br>LD50(oral,rat)= 850mg/kg<br>LD50(dermal,rabbit)= > 2000mg/kg |
| Carcinogenicity | Not considered to be carcinogenic as per IARC, NTP, OSHA, and ACGIH. |
| Reproductive Toxicity | Not reported to show reproductive toxicity. |
| Teratogenicity | Results in laboratory analysis show it is not a tetrogen |
| Mutagenicity | Results in laboratory analysis show it is not a mutagen |

## 12. Ecological information

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| Fish Toxicity | LC50(bluegill,96 hour)= 0.088mg/L<br>LC50(rainbow trout,96 hour)= 0.16mg/L<br>LC50(daphnia magna,48 hour)= 0.11mg/L |
| Biodegradability | Not available |
| Environmental Effects | Not available |

## 13. Disposal considerations

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| Waste Disposal | Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act. |

## 14. Transport information

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| DOT Classification | CLASS 5.1: Oxidizing material. |
| Identification | Calcium hypochlorite, dry : UN1748 PG: II |
| Special Provisions for Transport | Not available. |

## 15. Regulatory information

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| Federal and State Regulations | Pennsylvania RTK: Calcium hypochlorite Massachusetts RTK: Calcium hypochlorite TSCA 8(b) inventory: Calcium hypochlorite CERCLA: Hazardous substances.: Calcium hypochlorite |
| Other Regulations | OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). |
| Other Classifications | |
| WHMIS (Canada) | CLASS C: Oxidizing material. CLASS E: Corrosive solid. |
| DSCL (EEC) | R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. |
| HMIS (U.S.A.) | Health Hazard: 3 |

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| | Fire Hazard: 0 |
| | Reactivity: 2 |
| | Personal Protection: j |
| National Fire Protection Association (U.S.A.): | Health: 3 |
| | Flammability: 0 |
| | Reactivity: 1 |
| | Specific hazard: |
| Protective Equipment: | Gloves. Lab coat. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate<br>respirator when ventilation is inadequate. Splash goggles. |

## 16. Other information

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the users own assessment of workplace risk as required by other health and safety legislati

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