

MATERIAL SAFETY DATA SHEET (MSDS)

Liquid Chlorine Gas

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Liquid Chlorine Gas
Manufacturer: Yurachem
Corporate Address: Mumbai, Maharashtra, India

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: Gases under pressure (Liquefied gas); Acute Toxicity (Inhalation) – Category 2; Skin Corrosion – Category 1; Serious Eye Damage – Category 1.

Signal Word: **DANGER**

Hazard Statements:

- H280: Contains gas under pressure; may explode if heated dynamically.
- H330: Fatal, toxic, and highly dangerous if inhaled.
- H314: Causes severe, irreversible skin burns and permanent eye damage.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity	CAS Number	Concentration By Weight
Chlorine (Cl ₂)	7782-50-5	≥ 99.8% Percentage Volume

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Shift patient to open, fresh atmosphere immediately. If breathing stops, invoke artificial respiration immediately (avoid mouth-to-mouth layout). Call emergency medical teams.

- **Skin Contact:** Flood exposed skin areas with volumes of water for minimum 15 minutes while stripping infected clothing layers safely. Treat cryo-frostbite from escaping liquid carefully with lukewarm water.
- **Eye Contact:** Rinse eyes extensively with steady streams of moving water for a minimum of 20 to 30 minutes while elevating eyelids. Seek an immediate ophthalmologist assessment.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Systems: Chlorine gas is non-flammable but functions as a violent oxidizer. Apply localized cooling arrays (water spray masks) to containers or tonners caught in surrounding thermal fires to prevent high-pressure structural explosions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Evacuate all personnel located downwind of the structural gas leak zone immediately. Ensure all active emergency containment operators utilize **Self-Contained Breathing Apparatus (SCBA)** combined with completely sealed heavy chemical suit shielding panels. Prevent gas settlement across basement sectors, structural sewers, or pits since Chlorine is significantly heavier than air.

SECTION 7: HANDLING AND STORAGE

Handling: Employ specifically hardened, corrosion-resistant engineering piping arrays (e.g., specialized copper alloys or rated carbon steel). Never subject cylinders to unmonitored thermal heat sources. Secure cylinders during logistics handling.

Storage: Store structurally inside dedicated, cool, exceptionally well-ventilated warehouse blocks completely separate from organic matter, fuel arrays, or reactive bases. Fully compliant with **PESO (Petroleum and Explosives Safety Organisation)** industrial framework rules.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Caps: TLV-TWA: 0.5 ppm | STEL: 1 ppm (ACGIH criteria).

Personal Protective Equipment (PPE Framework):

- **Respiratory Shielding:** Positive pressure SCBA masks for tactical breach or leaking corrections.
- **Ocular Shielding:** Anti-fog chemical splash goggles coupled with clear full-face impact shields.
- **Dermal Protection:** Specialized heavy industrial Neoprene or PVC gloves alongside chemical-impervious full-body defensive aprons.