# SACHLO Profile

A Member of



شركة الشرق الأوسط للكيماويات (شركة مساهمة مقفلة) Middle East Chemicals Co. (Closed Joint Stock Co.)

# ساكلو SACHLO

Saudi Factory for Chlorine & Alkalies

# ىىياكلو SACHLO

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A huge majority of industries, such as metals, textile, paper, leather, sugar, plastics, rubber, oil & gas, ceramics, glass, soap, fertilizers, beverages, edible oil, pharmaceutical, and lot of others are all heavily dependent on chemicals. All over the world the chemical industry is a major contributor to the national economy, playing both a direct and indirect role.

For more than 5 years, SACHLO has strived to create value through its diversified, market-driven portfolio of Chlor-Alkali chemicals. SACHLO is one of the largest manufacturers of industrial chemicals in Kingdom of Saudi Arabia. It produces Caustic Soda, Liquid Chlorine, Hydrochloric Acid, Sodium Hypochlorite and Calcium Chloride.

Leveraging cost advantage, scale and geographic presence - together with close customer collaboration and industry leading R&D expertise, SACHLO is delivering differentiated solutions that address unmet market needs.

SACHLO uses the state of the art technologies from the world leading companies in their industries. SACHLO is a member of Midchem Group.

## 1. Liquefied Chlorine

Every time you drink a glass of water, read your newspaper, put on your raincoat, clean your teeth or drive your car, you are using Chlorine in some form. Without Chlorine, Modern life and most of its conveniences would be impossible.

Chlorine is the single material on which production of other chemicals mostly depends. It is used in 60% of all Commercial Chemistry, 85% of all Pharmaceutical Chemistry and 95% of all yield enhancing or agrochemical chemistry.

Products manufactured with chlorine as a raw material include Water Treatment Chemicals, Plastic, Detergents, Pharmaceuticals, Disinfectants and Agricultural Chemicals. Chlorine is also used directly in water to make it safe for drinking by chlorination. Chlorine is obtained by passing an electric current through a solution of brine to produce Caustic Soda, Chlorine and Hydrogen.

LIQUID CHLORINE (CL2) SPECIFICATIONS		
Purity as Chlorine (Cl2) % Min.	99.5	
Water	< 10.0 ppm w/w	
Residue	< 100 ppm w/w	

### **Material Handling**

Need to wash thoroughly after handling. Avoid breathing the vapors. Vacate poorly ventilated areas as soon as possible. Do not return until the strong odors have dissipated. Open the cylinders with care and do not intake internally.

### 2. Caustic Soda (Liquid & Flakes)

Caustic Soda, also known as Sodium Hydroxide, forms a strong alkaline solution when dissolved in water. SACHLO produces Caustic Soda in the form of flakes, liquid (31% and 50% concentration). Caustic Soda is used in a wide variety of industrial applications. It is used as a reactant for the manufacturing of other sodium components, which themselves may be intermediate or end-use products, such as Sodium Hypochlorite, having its use as a household Bleach and Disinfectant and Sodium Phenolate, required for making antiseptics and for the manufacturing of Aspirin. It is used in the manufacturing process of Soaps and Surfactants used in soap powders and also in the Textile Industry to remove containments. As bleach, it is used in the treatment of scoured cloth and to improve luster and dye absorption.

#### Caustic Soda Liquid (31% and 50%)

Caustic Soda Liquid is manufactured commercially by the electrolysis of brine in electrolytic cells, where 31% membrane grade and 50% Rayon grade Caustic Soda liquid is produced.

#### **Caustic Soda Flakes**

It is produced by evaporation of liquid Caustic Soda solution to the anhydrous state, and subsequent conversion to Flakes form.

CAUSTIC SODA SPECIFICATIONS	LIQUID (50%)	FLAKES
Physical Appearance	Colorless liquid	White Deliquescent Flakes
Concentration (NaOH)	50% min	98.5% min
Sodium Chloride (NaCl)	50.0 ppm max.	100.0 ppm max.
Sodium Carbonate (Na <sup>2</sup> CO <sup>3</sup> )	0.2% max.	0.5% max.
Iron (Fe)	5.0 ppm max.	10.0 ppm max.
Nickel (Ni)	2.0 ppm max.	3.0 ppm max.
Packing & Transportation	In M.S. Road Tankers of 25 M.T. capacity	In 25 Kg Net, Woven Polypropylene Bags (Sleeved inside with low Density Polythene liner)

#### **Material Handling**

Advised to store in a cool, dry, well ventilated storage area with acid resistant floor and good drainage. In order to avoid physical damage, it should be kept clear of direct sunlight, exposure to heat, water, and other incompatible materials.

## 3. Hydrochloric Acid

Hydrochloric acid is second only to Sulphuric Acid in its numerous and diverse uses in manufacturing industry and synthetic chemistry. Hydrochloric acid is a solution of the Gas Hydrogen Chloride (HCL) in water. The Hydrogen Chloride Gas is derived from the burning of Chlorine and Hydrogen.

HYDROCHLORIC ACID SPECIFICATIONS		
Physical Appearance	Slight yellow clear liquid	
Concentration	31.0% min	
Iron (Fe)	2.0 ppm max.	
Free Chlorine	5.0 ppm max.	
Arsenic (As)	Nil -	
Lead (Pb)	Nil -	
Mercury	Nil -	
Evaporation Rest	< 100 ppm	

#### **Material Handling**

Advised to store in a cool, dry, well ventilated storage area with acid resistant floor and good drainage. In order to avoid physical damage, it should be kept clear of direct sunlight, exposure to heat, water, and other incompatible materials.

### 4. Sodium Hypochlorite 12%

Sodium Hypochlorite is used for a wide range of applications where its powerful disinfection and oxidation properties are utilized to deliver technical and commercial advantage. It is manufactured by passing gaseous chlorine through a well-cooled solution of dilute Caustic Soda.

SODIUM HYPOCHLORITE (NaOCI) SPECIFICATIONS		
Physical Appearance	Greenish Yellow Liquid	
Available Chlorine	120.0 g/L min.	
Alkalinity as NaOH	14.0 g/L max.	
Iron contents	NA	
NaClO3	NA	

### **Material Handling**

Sodium hypochlorite is considered a strong oxidizer. Products of the oxidation reactions are corrosive. Solutions (more than 40% weight) can burn skin and cause eye damage, particularly when used in concentrated forms. The containers should be kept tightly closed and in a cool ventilated area

### 5. Calcium Chloride

Calcium Chloride possesses distinctive properties that make it the ideal choice for oil and gas industries, ice melting, dust control, concrete acceleration and many other applications. Its higher concentration provides a lower application rate releases heat to melt snow and ice faster and across a wider range of temperatures than other materials. Mix it with rock salt, sand and gravel to improve their performance. It reduces dust on unpaved surfaces by absorbing moisture from its surroundings, keeping the surface damp and binding dust particles to the gravel.

Solid calcium chloride is both hygroscopic and deliquescent. This means that the product can absorb moisture from the air, even to the point of converting to liquid brine. For this reason, solid calcium chloride should be protected from excessive exposure to moisture to maintain product quality while in storage. Store in a dry area. Opened packages should be tightly resealed after each use.

Calcium Chloride is available in two grades.

Calcium Chloride flakes 77 % Calcium Chloride Prills 94 %





PRILLS

FLAKES

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### **Saudi Factory for Chlorine & Alkalies**

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