

مدرك تحت كنترول  
۱۴۰۰/۰۹/۲۵  
Quality Assurance

MORE THAN  
**40** YEARS  
in pursuit of  
EXCELLENCE

#### Iran Head Office

1st Kushesh St., Imam Khomeini Blvd.  
Semnan Ind. Zone, Semnan, Iran  
Postal Code: 35351-64351  
P.O.Box: 35145-161  
Tel: +98 23 3365 2203 Fax: +98 23 3365 2235  
Website: www.ccpc.ir  
Email: info@ccpc.ir  
Instagram: @ccpciran

#### Italy Office

Registered Office: Ottavio Caccia St.  
No. 17/A - 37136 Verona (VR) Italy  
Trading and Logistics Office: 1 Maggio St.  
No. 5 - 20873 Cavenago Brianza (MB) Italy  
Tel: +39 02 95339789 Fax: +39 02 95019624  
Website: www.ccpc.it  
Email: info@ccpc.it



**CCPC**

CHLORAN CHEMICAL PRODUCTION COMPANY

*Relyeble Solutions*<sup>TM</sup>  
International Producer & Supplier of Chlor-Alkali Products



**CCPC**

<http://www.ccpc.ir>

[info@ccpc.ir](mailto:info@ccpc.ir)

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### ● CCPC® at a glance:

Founded in 1983 by M. Hamoun, as an international producer and supplier of chlor-alkali products, Chloran Chemical Production Company (CCPC®) has improved the people's daily lives for nearly four decades.

The water we drink, the preserved foods we eat, the bleaching agents we use, the pool we swim in and even the paper we write on, all depend on chlor-alkali universe and contribute to the health and safety of the people everywhere. Driven by its modern and innovative technology, CCPC® plays a vital role in supplying the required building blocks for these necessary reliable solutions by serving a wide range of industries.

### ● CCPC® main products include:

- ✓ Liquid Chlorine ( $\text{Cl}_2$ ) ..... Min 99.5%
- ✓ Caustic Soda Flakes ( $\text{NaOH}$ ) ..... Min 98%
- ✓ Liquid Caustic Soda ( $\text{NaOH}$ ) ..... 48 - 52%
- ✓ Calcium Chloride ( $\text{CaCl}_2$ ) ..... Min 94%
- ✓ Liquid Calcium Chloride ( $\text{CaCl}_2$ ) Min 36%
- ✓ Calcium Hypochlorite ( $\text{Ca}(\text{ClO})_2$ ) Min 65%
- ✓ Calcium Hypochlorite ( $\text{Ca}(\text{ClO})_2$ )  $60 \pm 3\%$
- ✓ Hydrochloric Acid ( $\text{HCl}$ ) ..... 31 - 33%
- ✓ Sodium Hypochlorite ( $\text{NaClO}$ ) .. 15 - 19%



Manouchehr Hamoun (Center) and colleagues building the future, 1983



### Founder's message: ●

With more than 40 years of brilliant local and international experience in chlor-alkali industry, we as Chloran Chemical Production Company (CCPC®) are a leading private commercial production firm, aiming for the implementation and development of our strategic thinking in chlor-alkali world, based on the sustainable and balanced development approaches throughout our production and supply chain.

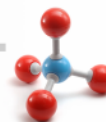
As one of the most qualified producers of chlorine and its derivatives which offers its products at a level beyond the standards, our company has received the required export licenses for its products to enter the international markets and as a result has turned into one of the biggest regional exporters of chlor-alkali products. Believing in a knowledge-based approach as the most

important pillar in increasing business competitiveness and development and relying on our priceless human resources and scientific principles, we are also pursuing the development of chlor-alkali science along with the continuous innovation and improvement and navigating a pioneer organization in all its aspects in accordance with our strategic plans.



Manouchehr Hamoun welcoming guests at chlor-alkali symposium, 2014

Manouchehr Hamoun  
Chairman of the Board





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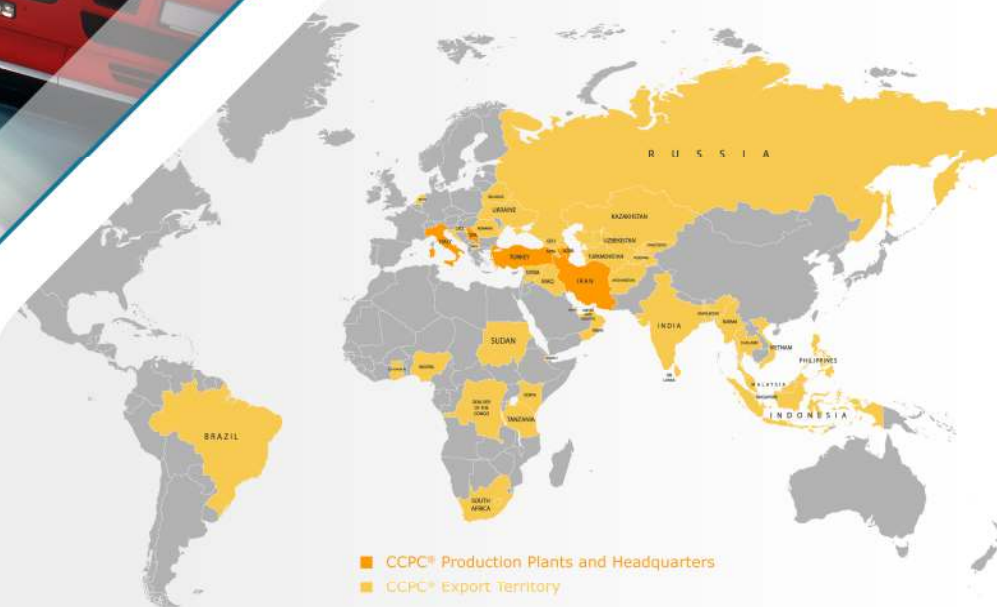
## CCPC® Logistics Division

Logistics is a fundamental part of CCPC® business and we understand the importance of ensuring that materials are delivered to our customers safely and on time. We place great emphasis on the quality of the services offered and equipment employed by our logistics department, ensuring that we reach the highest standards demanded by our customers. An online track and trace system would be also available by the GPRS equipped fleet during the transport stage. Our custom-tailored transport solutions has been expanded the operation territory of CCPC® to 43 countries worldwide:

- |               |               |                |          |
|---------------|---------------|----------------|----------|
| ✓ Afghanistan | ✓ Italy       | ✓ Serbia       | ✓ Kuwait |
| ✓ Armenia     | ✓ Kazakhstan  | ✓ South Africa |          |
| ✓ Azerbaijan  | ✓ Kenya       | ✓ Sri Lanka    |          |
| ✓ Bangladesh  | ✓ Kyrgyzstan  | ✓ Sudan        |          |
| ✓ Belarus     | ✓ Macedonia   | ✓ Syria        |          |
| ✓ Brasil      | ✓ Malaysia    | ✓ Tanzania     |          |
| ✓ Congo       | ✓ Myanmar     | ✓ Tajikistan   |          |
| ✓ Croatia     | ✓ Netherlands | ✓ Thailand     |          |
| ✓ Djibouti    | ✓ Nigeria     | ✓ Turkey       |          |
| ✓ Georgia     | ✓ Oman        | ✓ Turkmenistan |          |
| ✓ Ghana       | ✓ Philippines | ✓ U.A.E.       |          |
| ✓ India       | ✓ Qatar       | ✓ Ukraine      |          |
| ✓ Indonesia   | ✓ Romania     | ✓ Uzbekistan   |          |
| ✓ Iraq        | ✓ Russia      | ✓ Vietnam      |          |



## Custom-Tailored Logistics



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## Quality Control

### ● CCPC® Certified Laboratory

One of the most equipped laboratories of chlor-alkali industry, CCPC® certified analytical lab offers a wide range of services to the chemical world.

ISO/IEC 17025 accreditation together with qualified staff and high-tech equipments such as atomic absorption spectrometer, spectrophotometer, advanced furnace and high accuracy analytical balances enable the lab to control the quality of company products at various stages of production and shipment and also to work as an official third party partner for controlling raw materials quality, indentifying problems with production processes and measuring the possible presentation of various parameters like calcium, magnesium, heavy metals, iron, etc.) in ppb and ppm range in accordance with the regional and international standards.



## Customer Service

### CCPC® CRM Department ●

Current and future needs of the customers is the main concern and commitment of CCPC®'s CRM department. Assigning a unique batch number to each shipment is a part of the fully integrated order entry and inventory system for tracing and resolving the possible problems during the production and shipment.

Routine and emergency CRM sessions (attending by senior managers and customers' representative) together with periodic customer satisfaction surveys are the other main tools in identifying and passing customers' requirements.





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### ● CCPC® HSEI Department:

Health, Safety, Environment, Energy and Insurance have always been the company's primary concern and CCPC® HSEI department is committed to pursuing an environment free of incidents. This would only be possible through education, cultural development, and implementation of the international management systems, and for the very same reason, the establishment of HSE systems (in accordance with ISO:14001:2015 and ISO:45001:2018) and monitoring its proper implementation has always been the main responsibility of HSEI department.

### ● Environment & Energy:

As one of the most important pillars of sustainable production, safeguarding the environment is the headline of CCPC® long-term commitment which is being executed through the international standards implementation, legal requirements consideration and the observance of the following principles:

- ✓ Periodic evaluation of environmental pollutants
- ✓ Waste reduction and recycling through the waste management system
- ✓ Improvement projects in the field of water and other resources conservation
- ✓ Online monitoring of outlet chimneys
- ✓ Wastewater management
- ✓ Resources conservation and reducing energy consumption by the installation of exclusive electricity substation and high end electrolyzers



## Health Safety Environment

### Health & Safety: ●

Health screening of the company's staff (through pre-employment, periodic, and case checkups), the identification and assessment of health and safety related risks through HAZID, HAZOP, JSA methods, supplying and deployment of specialized safety equipment, securing production processes by the installation and utilization of chlorine and hydrogen detectors, Ex rated equipment, etc., are the most important part of CCPC® health and safety responsibility and commitment.

### Insurance: ●

In accordance with the risk management process, CCPC® insurance system completely covers the probable unexpected accidents and employee and employer related risks that may occur during the normal course of business.


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## Value Extraction

### ● CCPC® Mining Division

Rock salt and limestone are considered as the main raw materials in chlor-alkali universe and for the very same reason, CCPC® owns three huge rock salt mines and three super grade limestone mines (with annual capacities of tens of thousands of tonnes) in order to control the uniformity and the quality of the production raw materials.

The factory strategic location, from the aspect of minerals availability, quality and quantity, resulting to low supplying costs, enables us to produce the products at a competitive price and quality.

## Availability Quality Quantity

### ● CCPC® Mines

The capacity of CCPC® mines are as follows:

- ✓ Rock salt mine with the capacity of Mt 50,000/year
- ✓ Rock salt mine with the capacity of Mt 30,000/year
- ✓ Rock salt mine with the capacity of Mt 25,000/year
- ✓ Limestone mine with the capacity of Mt 16,000/year
- ✓ Limestone mine with the capacity of Mt 10,000/year
- ✓ Limestone mine with the capacity of Mt 10,000/year



## No-Explosive Policy

Mine blasting causes several adverse environmental effects such as ground vibrations, airblast and generation of fines and fumes. In order to avoid these effects, to reap the benefits of continuous operation and to reach the required grade and aggregation, CCPC® uses drum cutter technology throughout the salt excavation process.



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## ● CCPC® University of Applied Sciences

Each student deserves the best possible higher education.

Education in which students are acknowledged and recognized, are given equal opportunities, and are challenged to reach for the highest achievable goal.

With respect to the realization of a 4th generation university and regional development, CCPC® university of applied sciences is the Middle East's first and only educational institution specialized for and dedicated to the chlor-alkali universe.

## ● Fields of Education

Some of the main programs and courses of the university are as follows:

### Associate's Degree:

- ✓ Technical Associate of industrial chemistry (chlor-alkali production plant)
- ✓ Technical Associate of industrial and laboratory chemistry
- ✓ Technical Associate of occupational safety and technical security
- ✓ Technical Associate of electricity (industrial electricity)
- ✓ Technical Associate of mechanics (industrial installations mechanics)

### Bachelor's Degree:

- ✓ Professional bachelor of industrial health, safety and environment (HSE)
- ✓ Bachelor of industrial chemistry technology (chlor-alkali production plant)
- ✓ Bachelor of waste recycling technology



*Skilled Hands  
and  
Prolific Minds*



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### ● CCPC® Research & Development Dept.

The production based on new ideas is CCPC® research and development department agenda. Following this agenda and considering the environmental issues of chlor-alkali industry, we are proudly trying to produce all products with innovative knowledge-based methods. All the research activities of this department has been focused on environmental aspects and accordingly one of the patented solutions of the company has been solved the waste water disposal problem of calcium hypochlorite plant in an innovative technological way leading to the achievement of several invention awards in 2018.

Close collaboration between CCPC® and internationally accredited institutions and utilization of innovative production methods has enabled us to expand the company's product portfolio and subsequently to improve the technological level of the chlor-alkali universe.

### ● CCPC® Innovation Center of Chlorine and Related Industries

The innovation center of CCPC®'s university of applied science and technology has provided the required environment for getting the research activities done in coordination with other universities, research institutes, and science centers and also with constructive interactions among researchers, scholars, professors and students interested in chlor-alkali science.

In order to optimize the processes related to chlor-alkali industry, all Center's activities are focused on innovation and creativity, and the organization is always ready and honored to cooperate and interact with the international scientific and industrial community.



*Driven  
by  
Research and Development*



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## Calcium Hypochlorite



**65 - 70 %**

**57 - 63 %**

*Relyable  
Safety™*



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Quality Assurance ✓

Guaranteed chemical stability and activity  
of the product through the state-of-the-art  
**AWARD-WINNING PATENTED METHOD**



### Product Overview:

A white granular solid in two grades that consist of sodium process (active chlorine 65 to 70%) and calcium process (active chlorine 57 to 63%), calcium hypochlorite is commonly used to sanitize public swimming pools and disinfect drinking water. CCPC® calcium hypochlorite is highly soluble in water and is produced via an exclusive award-winning patented process.

The difference in calcium hypochlorite grades is in the rate of purity of the product, insoluble materials, and dissolubility rate, which increases the duration of dissolution and the rate of insoluble substances in accordance with decreasing the purity.

### Applications: ✓ Water and wastewater treatment ✓ Swimming pool disinfection

### Standard Packaging: 25 and 40 Kg P.E. square drums (to be carried on shrink wrapped pallets)

Option 1 (25Kg square drums): 36 x = » 22 x =

Option 2 (40Kg square drums): 27 x = » 22 x =

### CCPC® Calcium Hypochlorite Technical Data Sheet:

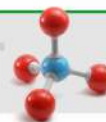
Physical & Chemical Propertie	ISIRI Compliant Range	CCPC Product Range 65-70% 57-63%	Standard Reference
Active Chlorine _ %w/w	Min 65	Min 65 60±3	ISIRI 7098 & 3352
Insoluble in Water _ %w/w	Max 6	Max 6 Max 12	ISIRI 7098
Solubility as Active Chlorine _ %w/w	Min 45.5	Min 50 Min 40	ISIRI 7098
Sodium Chloride _ %w/w	Max 20	Max 10	ISIRI 7098
Amount of Water _ %w/w	16	2 - 8	ISIRI 7098
Residue on 425 Micrometer Sieve _ %w/w	Min 75	Min 75	ISIRI 7098 & 3352
Residue on 2 mm Sieve _ %w/w	Max 20	Max 20	ISIRI 7098 & 3352
Cd _ mg/Kg of Active Chlorine	Max 5	Nil	ISIRI 7098
Pb _ mg/Kg of Active Chlorine	Max 15	Max 8	ISIRI 7098
Ni _ mg/Kg of Active Chlorine	Max 8	Max 8	ISIRI 7098
Cr _ mg/Kg of Active Chlorine	Max 15	Max 12	ISIRI 7098
As _ mg/Kg of Active Chlorine	Max 5	Max 2	ISIRI 7098
Hg _ mg/Kg of Active Chlorine	Max 5	Max 1	ISIRI 7098
Sb _ mg/Kg of Active Chlorine	Max 15	Max 5	ISIRI 7098
Se _ mg/Kg of Active Chlorine	Max 20	Max 5	ISIRI 7098
Fe _ %w/w	Max 0.5	Max 0.2	ISIRI 3352
Appearance	White, Granulated	OK	ISIRI 7098 & 3352



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[info@ccpc.ir](mailto:info@ccpc.ir)

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## Calcium Chloride

$\text{CaCl}_2$

94%

Relyeble  
Additive™



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۱۴۰۰/۰۹/۲۵

Quality Assurance ✓

### FOOD & INDUSTRIAL SUPER GRADE

produced via limestone/hydrochloric acid  
method using high purity raw materials

#### Product Overview:

From de-icing the driveways to drilling the oil fields and even processing the foods, calcium chloride plays an essential role in our daily life. CCPC® calcium chloride is a white granular solid, free of heavy metals and other impurities being produced through the process of high quality limestone and extra pure hydrochloric acid and is available in food and industrial grades.

**Applications:** ✓ Food Processing ✓ De-icing ✓ Desiccating ✓ Water Treatment  
✓ Oil-well Drilling ✓ Metallurgy

**Standard Packaging:** Available in 1000 Kg 2-ply p.p. bulk bags or 25 Kg 2-ply p.p. bags to inside bulk bags

Option 1 (Bulk) : 1000 Kg =  » 25 x  = 

Option 2 (Jumbo) : 40 x  =  » 25 x  = 

#### CCPC® Calcium Chloride Technical Data Sheet:

Physical & Chemical Propertie	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Purity of Calcium Chloride ( $\text{CaCl}_2$ ) _ %w/w (anhydrous)	Min 94	Min 94	ISIRI 18193
Total Alkalinity (as NaCl) _ %w/w Relative to active substance $\text{CaCl}_2$	Max 6	Max 4	ISIRI 18193
Fluoride(F) _ %w/w	Max 0.004	Max 0.003	ISIRI 13571
Total magnesium (as $\text{MgCl}_2$ ) _ %w/w Relative to active substance $\text{CaCl}_2$	Max 0.5	Max 0.2	ISIRI 18193
$\text{Ca}(\text{OH})_2$ _ %w/w Relative to active substance $\text{CaCl}_2$	Max 0.2	Max 0.1	ISIRI 18193
Appearance	White, Granulated	OK	ISIRI 13571
Particle size	-	1-4 mm	-

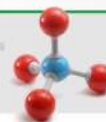


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# Caustic Soda Flakes

NaOH

98 - 99%

Relyable  
Quality™



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۱۴۰۰/۰۹/۲۵

Quality Assurance

## FOOD AND INDUSTRIAL SUPER GRADE

produced by high-end membrane technology  
free of heavy metals or any other impurities

### Product Overview:

Also known as sodium hydroxide, caustic soda is a white solid and highly alkaline compound with a wide variety of applications. CCPC® caustic soda flake is being produced through high-end membrane electrolysis by which the final products would be free of heavy metals and as a result available in high quality food and industrial super grades.

### Applications:

✓ Alumina refinery ✓ Pulp & paper industry ✓ Soaps & detergents  
✓ Oil & gas industry ✓ Mining & drilling ✓ Food industry ✓ Chemical production

### Standard Packaging: 25 Kg 2-ply p.p. bags (to be carried on shrink wrapped pallets or inside 2-ply jumbo bags)

Option 1 (Pallet) : 50 x = » 20 x =

Option 2 (Jumbo) : 50 x = » 20 x =

### CCPC® Caustic Soda Flakes Technical Data Sheet:

Physical & Chemical Properties	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Purity of Sodium Hydroxide _ %w/w	Min 98	Min 98	ISIRI 364
Carbonate as Na <sub>2</sub> CO <sub>3</sub> _ %w/w	Max 1	Max 0.5	ISIRI 364
Chloride as NaCl _ %w/w	Max 0.06	Max 0.02	ISIRI 364
Sulfate as Na <sub>2</sub> SO <sub>4</sub> _ %w/w	Max 0.01	Max 0.005	ISIRI 364
Silicate as SiO <sub>2</sub> _ %w/w	Max 0.02	Max 0.005	ISIRI 364
Fe _ mg/Kg	Max 30	Max 15	ISIRI 364
Insoluble in Water _ %w/w	Max 0.1	0.00	ISIRI 364
Aluminum as Al <sub>2</sub> O <sub>3</sub> _ mg/Kg	Max 20	Max 20	ISIRI 364
Heavy Metals as Pb _ mg/Kg	Max 20	Max 20	ISIRI 364
Mercury as Hg _ mg/Kg	Max 0.2	Max 0.15	ISIRI 364
Arsenic as As <sub>2</sub> O <sub>3</sub> _ mg/Kg	Max 2	Max 0.5	ISIRI 364
Appearance	White Color, Free of Visible Impurities	OK	ISIRI 364



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# Liquid Caustic Soda

NaOH

## 48 - 52%

Relyable  
Solution™



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Quality Assurance

**MEMBRANE GRADE, EXTRA PURITY**  
produced through the electrolysis of brine  
according with the international standards

### Product Overview:

In liquid form sodium hydroxide is a colourless, odourless and non-flammable solution with a vast application. CCPC® high-end electrolysis production method guarantees the final product to be free of heavy metals and any other impurities with a concentration of 48 to 52%.

**Applications:** ✓ Alumina refinery ✓ Pulp & paper industry ✓ Chemical production  
✓ Oil & gas industry ✓ Mining & drilling ✓ Soaps & detergents production

**Standard Packaging:** Available in bulk (to be carried by tanker trailer)

Option 1 (Bulk depending on the capacity of tanker truck) :



### CCPC® Liquid Caustic Soda Technical Data Sheet:

Physical & Chemical Propertie	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Purity of Sodium Hydroxide _ %w/w	Min 48	Min 48	ISIRI 364
Carbonate as Na <sub>2</sub> CO <sub>3</sub> _ %w/w	Max 0.5	Max 0.3	ISIRI 364
Chloride as NaCl _ %w/w	Max 0.03	Max 0.015	ISIRI 364
Sulfate as Na <sub>2</sub> SO <sub>4</sub> _ %w/w	Max 0.007	Max 0.004	ISIRI 364
Silicate as SiO <sub>2</sub> _ %w/w	Max 0.01	Max 0.005	ISIRI 364
Fe _ mg/Kg	Max 10	Max 7	ISIRI 364
Insoluble in Water _ %w/w	Max 0.05	0.00	ISIRI 364
Aluminum as Al <sub>2</sub> O <sub>3</sub> _ mg/Kg	Max 10	Max 10	ISIRI 364
Heavy Metals as Pb _ mg/Kg	Max 10	Max 10	ISIRI 364
Hg _ mg/Kg	Max 0.1	Max 0.1	ISIRI 364
Arsenic as As <sub>2</sub> O <sub>3</sub> _ mg/Kg	Max 1	Max 1	ISIRI 364
Appearance	Colorless, Clear, Free of Sediment & Suspended Particles	OK	ISIRI 364

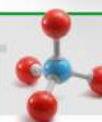


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# Sodium Hypochlorite

NaClO

## 15-19%



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Relyeble  
Bleach™



HIGHER ACTIVITY AND STABILITY  
by the combination of chlorine and lye  
through innovative rapid batch method



### Product Overview:

Commonly known as bleach, sodium hypochlorite is produced as an aqueous solution by combining chlorine gas and sodium hydroxide. CCPC® sodium hypochlorite is available in a range of 15 to 19% concentration and is being produced by innovative rapid batch method.

### Applications: ✓ Bleaching ✓ Textile industry ✓ Water and wastewater treatment

### Standard Packaging: available in 220 litre drums (to be carried on pallet) and bulk (to be carried by tanker trailer)

Option 1 (Drum): 4 x - 1 Mt » 22 x -

Option 2 (Bulk) note: 19% product should be only carried as bulk.

### CCPC® Sodium Hypochlorite Technical Data Sheet:

Physical & Chemical Propertie	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Active Chlorine _ % w/v	Min 12.5	15 - 16	ISIRI 2361
Sodium Chlorate _ % w/w	Max 0.7	Max 0.2	ISIRI 2361
Free Sodium Carbonate as Na <sub>2</sub> CO <sub>3</sub> _ % w/v	Max 1	Max 0.8	ISIRI 2361
Density at 20°C _ g/cm <sup>3</sup>	Min 1.20	Min 1.20	ISIRI 2361
Free Alkaline as NaOH _ % w/w	Min 0.5 & Max 1.2	Min 0.5 & Max 1.20	ISIRI 2361 & 8394
Sodium Bromat _ g/Kg of Active Cl <sub>2</sub>	Max 2.5	Max 2.5	ISIRI 8394
As _ mg/Kg of Active Chlorine	Max 1	Max 0.5	ISIRI 8394
Cd _ mg/Kg of Active Chlorin	Max 2.5	Nil	ISIRI 8394
Cr _ mg/Kg of Active Chlorine	Max 2.5	Nil	ISIRI 8394
Pb _ mg/Kg of Active Chlorine	Max 15	Nil	ISIRI 8394
Sb _ mg/Kg of Active Chlorine	Max 20	Max 1	ISIRI 8394
Se _ mg/Kg of Active Chlorine	Max 20	Max 1	ISIRI 8394
Co _ µg/g	Max 0.5	Nil	ISIRI 2361
Cu _ µg/g	Max 0.5	Nil	ISIRI 2361
Fe _ µg/g	Max 3	Max 1	ISIRI 2361
Ni _ µg/g	Max 0.5	Nil	ISIRI 2361
Hg _ µg/g	Max 0.1	Max 0.1	ISIRI 2361
Appearance	Yellow, Clear, Free of Sediment and Suspended Particles	OK	ISIRI 8394 & 2361

\* The amount of active chlorine and free alkaline (NaOH) would be adjustable upon customers' request.



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# Hydrochloric Acid

HCl

## 31 - 33%

Relyable  
Acidity™



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۱۴۰۰/۰۹/۲۵

Quality Assurance ✓

**A COLORLESS AQUEOUS SOLUTION**  
produced through direct combination of  
extra pure hydrogen and chlorine gases

### Product Overview:

A highly corrosive liquid, hydrochloric acid plays an important role in the manufacturing of a wide range of consumer products. CCPC® hydrochloric acid is a product of direct synthesis of pure chlorine and hydrogen, both of which are formed during on site electrolysis process.

### Applications: ✓ Metal pickling ✓ Chemical synthesis ✓ pH control ✓ Oil fields

### Standard Packaging: available in 220 litre drums (to be carried on pallet), and bulk (to be carried by tanker trailer)

Option 1 (Drum): 4 x = 1 Mt ➤ 22 x =

Option 2 (Bulk depending on the capacity of tanker truck) :



### CCPC® Hydrochloric Acid Technical Data Sheet:

Physical & Chemical Propertie	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Concentration _ %w/w of HCl	Min 30	30 - 33	ISIRI 209
Density at 20°C _ g/mL	Min 1.15	Min 1.15	ISIRI 209
Sulfate as SO <sub>4</sub> <sup>2-</sup> _ ppm	Max 100	Max 50	ISIRI 209
Heavy Metal as Pb _ ppm	Max 2	Max 2	ISIRI 209
Free Chlorine and Bromine as Cl _ ppm	Max 20	Max 18 (controllable to 0 ppm)	ISIRI 209
Iron as Fe _ ppm	Max 5	Max 0.5	ISIRI 209
Sulfite as SO <sub>3</sub> <sup>2-</sup> _ ppm	Max 50	Max 20	ISIRI 209
Arsenic as As _ ppm	Max 1	Max 1	ISIRI 209
Mercury as Hg _ ppm	Max 1	Max 0.25	ISIRI 209
Copper as Cu _ ppm	Max 1	Max 0.9	ISIRI 209
Lead as Pb _ ppm	Max 1	Max 1	ISIRI 209
Appearance	Clear, Free of Sediment and Suspended Particles	OK	ISIRI 209

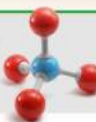


<http://www.ccpc.ir>

[info@ccpc.ir](mailto:info@ccpc.ir)

ITALY / SERBIA / IRAN / AZERBAIJAN / TURKEY

CONTACT





# Chlorine Gas

Cl<sub>2</sub>

99.5 %

Relyable  
Purity™



مدرك تحت كنترول  
۱۴۰۰/۰۹/۲۵  
Quality Assurance

## STANDARD & SAFE CHLORINATION

The pure chlorine gas generated by high-end membrane electrolysis of the brine

### Product Overview:

A yellowish green toxic gas with strong odor, chlorine is an extremely reactive element and a strong oxidising agent used in a vast range of production processes. CCPC® liquid chlorine is produced by liquefaction of the chlorine gas that is formed through the electrolysis process.

### Applications:

- ✓ Coatings and paints
- ✓ Pulp & paper industry
- ✓ Water and wastewater treatment
- ✓ Polymer industry
- ✓ Chemical synthesis

### Standard Packaging: available in 45 Kg and 800 Kg rechargeable cylinders

Shipping Details:  = 800 Kg  14 x  =

### CCPC® Chlorine Gas Technical Data Sheet:

Physical & Chemical Properties	ISIRI Compliant Range	CCPC Product Range	Standard Reference
Purity _ %w/v	Min 99.5	Min 99.5	ISIRI 18408
Gas Impurities _ %w/v	Max 0.5	Max 0.3	ISIRI 18408
Moisture _ %w/w	Max 0.015	Max 0.01	ISIRI 18408
Non-Volatile Matters _ %w/w	Max 0.015	Max 0.007	ISIRI 18408

### Cylinder Testing & Descaling:

Complete depletion, chemical cleaning and descaling, internal and external inspection of the cylinders, flanges and valves check, weighing and applying thickness measurement, performing hydrostatic and pneumatic tests, and if necessary, additional ultrasonic tests are the standard procedure of cylinders quality control done by CCPC® QC department in accordance with the international standards.

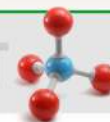


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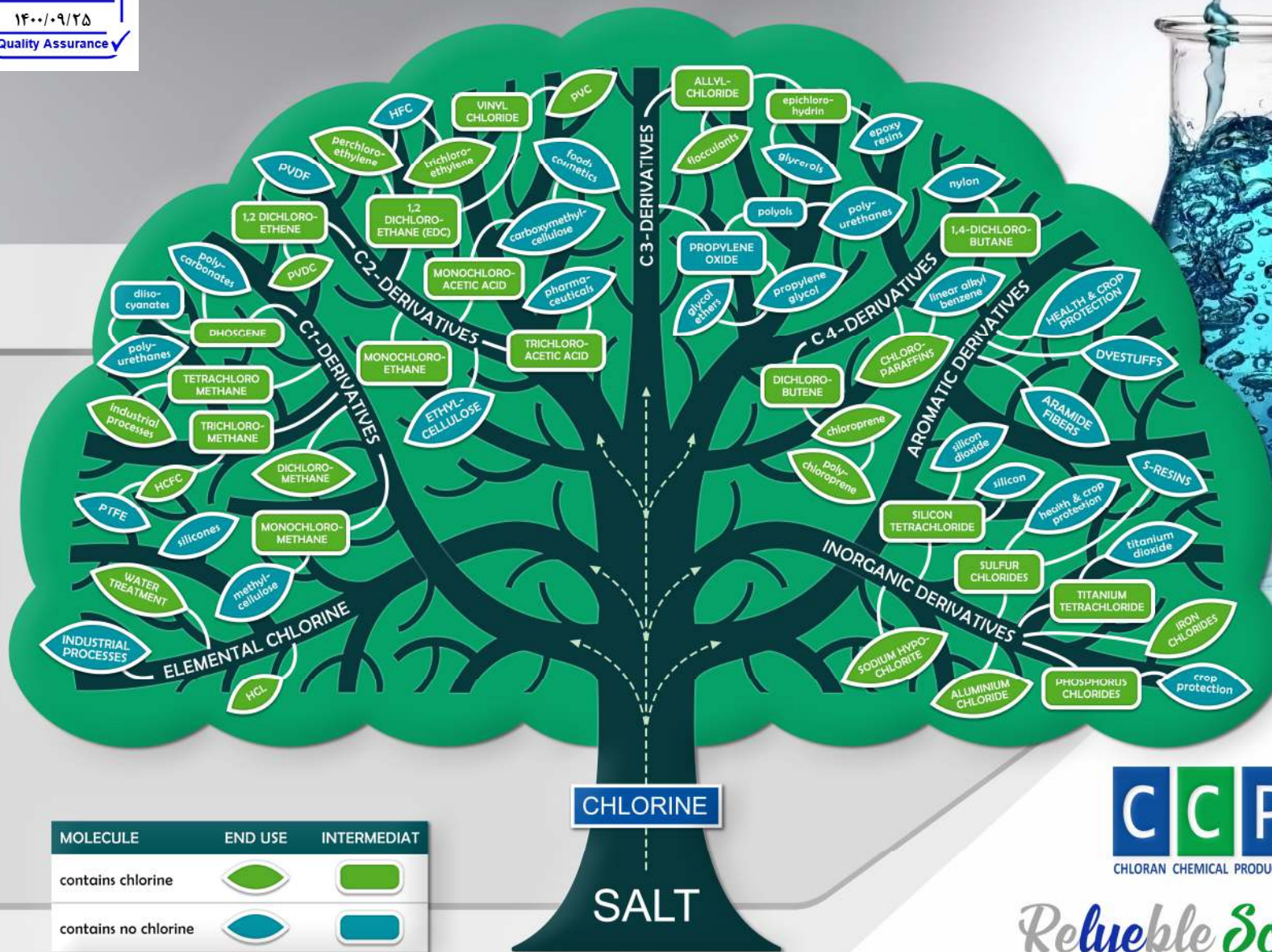


# Welcome to the Chlorine World

مدیریت کیفیت کنترل

۱۴۰۰/۰۹/۲۵

Quality Assurance



MOLECULE	END USE	INTERMEDIAT
contains chlorine		
contains no chlorine		

**CCPC**  
CHLORAN CHEMICAL PRODUCTION COMPANY

*Relyeble Solutions*<sup>TM</sup>  
International Producer & Supplier of Chlor-Alkali Products