

## OUR VISION

A dominant and admired chemical and related services company for enhancing life and preserving the environment. A dynamic and profitable company focused on value leadership, reliable service and premium customer satisfaction.

## OUR MISSION

We shall be the supplier of choice in our markets by being responsive to the needs of our customers and providing them the best value for money.

We shall maintain an organization that relentlessly pursues market opportunities, driven by a shared passion for success, enabled by an empowering environment for pursuing business goals, innovation, professional growth and personal fulfilment, and supported by a culture that recognizes the value-added contributions of its employees.

We shall comply with legal and regulatory requirements, continually improve our management systems and practice Responsible Care® in the way we conduct business and contribute to the development of the communities where we operate to enhance the quality of life.

We are committed to continually undertake measures to enhance the value of the company to its shareholders.

## KEY STRENGTHS

### The Market Leader

MVC is a market leader in the Philippines, being the only manufacturer of caustic soda and producer of merchant chlorine in the country. The company is a pioneer in the production of quality sodium hypochlorite utilizing a cutting-edge technology.

### Non-Discrimination and Equal Opportunity in the Workplace

The company has incorporated in its programs components that prohibit discrimination and unequal opportunity in the workplace. These include meeting the basic needs of all the employees in terms of competitive salaries and wages, hospitalization/dental care that extends to employees' dependents, and due process for promotions and/or appraisals.

### Strong Logistics Capability

MVC's manufacturing facilities are located in Iligan City and Biñan, Laguna but it has depot facilities that serve the requirements of customers anywhere in the country. Depots in Batangas, Cebu, Negros, Iligan and Davao ensure total and dominant coverage and distribution of its products.

### Competent and Highly-Skilled Staff

The company has self-initiated programs to empower employees through training and development curricula that enhance general and specialized skills, and trainings in ISO 9001, ISO 14001, and ISO 45001 compliance.

## Caring for the Environment

*"Enhancing the quality of life by continued care for the environment and applying the most appropriate and environmentally-safe technology"*

Mabuhay Vinyl Corporation implements systems and processes that ensure compliance to all laws on Health, Safety and Environmental Standards. It is dedicated to the efficient use of resources, the continuous development of new earth-friendly practices, and the preservation of the balance of nature in and around MVC work sites.

The company's continuing commitment in caring for the environment has received recognition, among them, the Hall of Fame Award of the Don Emilio Abello Award for Energy Efficiency, and the Child-Friendly Firm Award from the Employers Confederation of the Philippines.

MVC focuses on sustaining business through environment-friendly practices, by actively participating in programs such as Responsible Care®, which is designed to promote social dimensions of sustainable development and to demonstrate the responsiveness of the company to the needs and concerns of the public.

MVC is certified to ISO 9001:2015 quality standards. Its Mabuhay Premium Bleach Plant (MBPB) in Sta. Rosa, Laguna is also ISO 14001:2015 certified for Environmental Management System while its Iligan Plant is certified for its Integrated Management System consisting of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

MVC is an active partner of the United Nations Global Compact, an international initiative that brings companies together with UN agencies, labor and civil society in support of universal environment and social principles.

Following are some of the environmental projects MVC has implemented successfully:

- Expansion of the caustic soda plant using state-of-the-art ion-exchange membrane technology, a cost-efficient and environment-friendly process in the manufacture of caustic soda, hydrochloric acid and chlorine;
- Recovery of waste chlorine gas as supplemental raw material for the production of sodium hypochlorite;
- Reinforced concrete disposal pit for the safe disposal of toxic and hazardous solid wastes;
- Conservation of resources and reduction of energy consumption by Process Efficiency Improvement, Process Recycling and Material Substitution, Improved Housekeeping and Preventive Maintenance;
- MVC's Victor & Patro Park, a man-made lagoon beside its manufacturing complex in Iligan City, is regarded by the Department of Tourism as a must-see attraction for nature lovers;
- Upgrade of Iligan Plant's boiler enables the use of by-product hydrogen as a supplemental fuel. Emission of greenhouse gases is lowered with the reduction in bunker oil consumption;
- Replacement of the Chlorine Refrigeration Unit at Iligan Plant improves production efficiency, streamlines operations and maintenance, and eliminates the use of ammonia.

Over the years, MVC has succeeded in inculcating sound business practices—from protecting the environment to upholding human rights as well as promoting and adhering to labor standards—not only among its employees, but also in its business supply chain.



## OFFICES & DEPOT

### HEAD OFFICE

22/F Salcedo Towers 169 H.V. Dela Costa St.,  
Bel-Air, Salcedo Village, Makati City  
Tel. Nos. (632) 8817-8971 to 76  
Fax No. (632) 8816-4785 • (632) 8867-2486

### ILIGAN PLANT

Assumption Heights, Buru-un, Iligan City  
Tel. Nos. (6363) 221-3180 • (6363) 221-1190  
Telefax No. (6363) 221-1753

### MABUHAY PREMIUM BLEACH PLANT

109 Commerce Road, Phase 2, Block 2, Lot 8  
Laguna Technopark, Inc. (LTI), Brgy. Malamig, Biñan, Laguna

### CEBU OFFICE / DEPOT

J.M. Ceniza St., Ouano Reclamation Area,  
Looc, Mandaue City, Cebu  
Tel. No. (6332) 344-525  
Fax No. (6332) 346-0566

### BATANGAS DEPOT

BBTI Compound, Bo. San Miguel, Bauan, Batangas  
Tel. No. (6343) 980-5869  
Fax No. (6343) 980-5870

### DAVAO DEPOT

Pacific Oil Farmers Inc. Compound Km 23, Bunawan,  
Davao City  
Telefax No. (6382) 236-0015

### NEGROS DEPOT

Pulupandan, Negros Occidental

[www.mvc.com.ph](http://www.mvc.com.ph)



MABUHAY VINYL  
CORPORATION

# ENHANCING LIFE

MVC is one of the Philippines' leading providers of chemical products and related services for enhancing life and preserving the environment.

Effective Date: 10/01/2023; Revision: 04



Mabuhay Vinyl Corporation (MVC), the only chlor-alkali manufacturer in the Philippines and also the largest importer of liquid caustic soda today, traces its humble roots to a shoe factory.

Mabuhay Rubber Corporation was founded in 1934 by the late Judge Guillermo B. Guevara. However, when its production facilities were completely razed during World War II, the company had to cease operations.

Two decades after the end of the war, seeing the need to support the country's manufacturing base, Judge Guevara and his son Victor revived the company, shifting to the production of caustic soda and polyvinyl chloride resin—chemical products used in making a wide range of consumer goods.

In 1965, the Guevaras engaged the technical services of Shin-Etsu Chemical Industry Co. Ltd. of Tokyo to set up an amalgam caustic soda and PVC resin plant in Iligan City in Northern Mindanao.

In 1966, the company changed its name to Mabuhay Vinyl Corporation (MVC) for closer identification with its main product: PVC resin.

The 1970s was a period of expansive growth for MVC. A chlor-alkali plant using diaphragm cells was put on-stream in 1979, increasing the company's production capacity four-fold. To expand into new markets, the company set up a liquid chlorine plant. It also put up tank depot facilities in Manila, Cebu, Batangas, and Negros Oriental. In 1980, MVC acquired its first chemical marine tanker—M/T Snoopy I—to transport its new product, hydrochloric acid.

With the infusion of capital from the Bank of the Philippine Islands (BPI) and Maria Christina Chemical Industries (MCCI) in 1990, MVC was able to flex its financial muscle for future development. This included the expansion of its Batangas depot in 1992. In 1993, the company completed the construction of the Mabuhay Premium Bleach Plant (MPBP) at the Laguna Technopark, and also put up a tank for sodium hydroxide in Sasa, Davao City.

In December 1996, MVC together with Tosoh Corporation, Mitsubishi Corporation and BPI signed a Joint Venture Agreement (JVA) to establish a PVC resin plant in Bataan under the name of Philippine Resins Industries, Inc. (PRII). Shortly thereafter, in February 1997, MVC had a successful Initial Public Offering at the Philippine Stock Exchange. The capital raised was used to fund MVC's equity in PRII.

After the 1997 Asian economic crisis, MVC decided to completely move out of the PVC business to focus on its core competence:

the chlor-alkali business. In 2001, MVC divested its shares in PRII and started construction of its first Ion Exchange Membrane (IEM) caustic soda plant.

The decision paid off. In 2003, MVC completed its first IEM plant in Iligan; launched M/T Snoopy II, its second marine tanker for hydrochloric acid; and consolidated its Luzon logistics operation in the Bauan, Batangas depot.

In 2008, the company inaugurated its second IEM plant. It was built with state-of-the-art chlor-alkali production technology utilizing the n-BITAC electrolyzers supplied by the Chlorine Engineers Corp. Ltd. of Japan, in partnership with Tosoh Corporation.

To better serve the logistics requirements and the demands of the market, MVC commissioned its first caustic soda tanker, M/T Snoopy III in 2011.

Between 2000 and 2015, Tosoh Corporation acquired a total of 87.97% of the total outstanding shares of MVC to become the majority shareholder of the company.

Tosoh Corporation is a Japanese chemical and specialty products and materials group that comprises over 140 companies worldwide and a multi-ethnic workforce of more than 11,500 people. Tosoh is also the largest chlor-alkali producer in Japan. Its principal markets include chemical and petrochemical, construction, automotive, consumer electronics, information technology, bioscience and environmental markets.

Tosoh was established in 1935 and in the 80 years that it has been in business, Tosoh has built balanced product lines of commodity chemicals for industry and of specialty products and materials for high technology and niche markets.

Currently, MVC operates a modern, highly-efficient, and environment-friendly manufacturing plant complex in Iligan City, and the Mabuhay Premium Bleach Plant at the Laguna Technopark in Biñan, Laguna. It has its own port facilities where salt is unloaded from foreign vessels and liquid products are loaded through a network of pipelines.

To this day, the company has retained the name Mabuhay Vinyl Corporation, renowned and respected in the industry as the sole domestic producer and major importer of caustic soda and enjoys a leading position in the hydrochloric acid, sodium hypochlorite and chlorine markets.

With Tosoh's support, MVC aims to be the leading producer and supplier of chlor-alkali products and related chemicals and services in the Philippines.

## PRODUCT SPECIFICATIONS

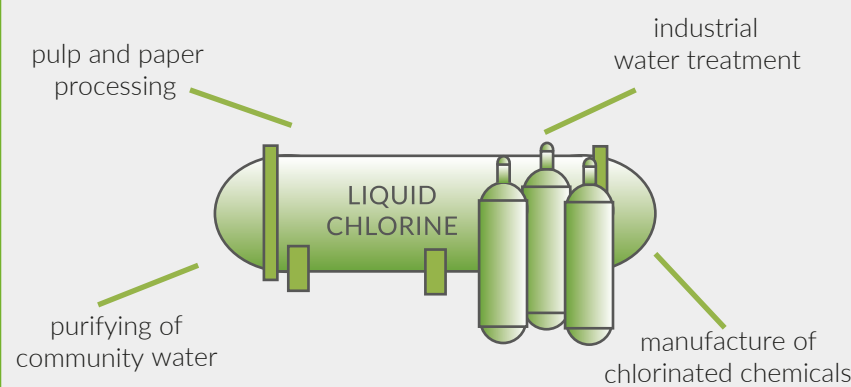
LIQUID CAUSTIC SODA (NaOH)	
Product Grade	IEM GRADE
% Sodium hydroxide (NaOH), min.	48.00
Specific Gravity @ 30°C, min.	1.504
% Total Alkali as Na <sub>2</sub> O, min.	37.20
% Sodium carbonate (Na <sub>2</sub> CO <sub>3</sub> ), max.	1.00
% Sodium sulfate (Na <sub>2</sub> SO <sub>4</sub> ), max.	0.10
% Sodium chloride (NaCl), max.	0.01
% Sodium chlorate (NaClO <sub>3</sub> ), max.	0.01
ppm Iron (Fe), max.	5.00
ppm Mercury (Hg)	Nil
Appearance: clear, colorless viscous liquid	

HYDROCHLORIC ACID (HCl)	
% Hydrochloric acid (HCl)	31.50-33.50
Specific Gravity @ 30°C	1.152-1.164
ppm Iron (Fe), max.	5.00
Appearance: clear, colorless to yellow liquid	

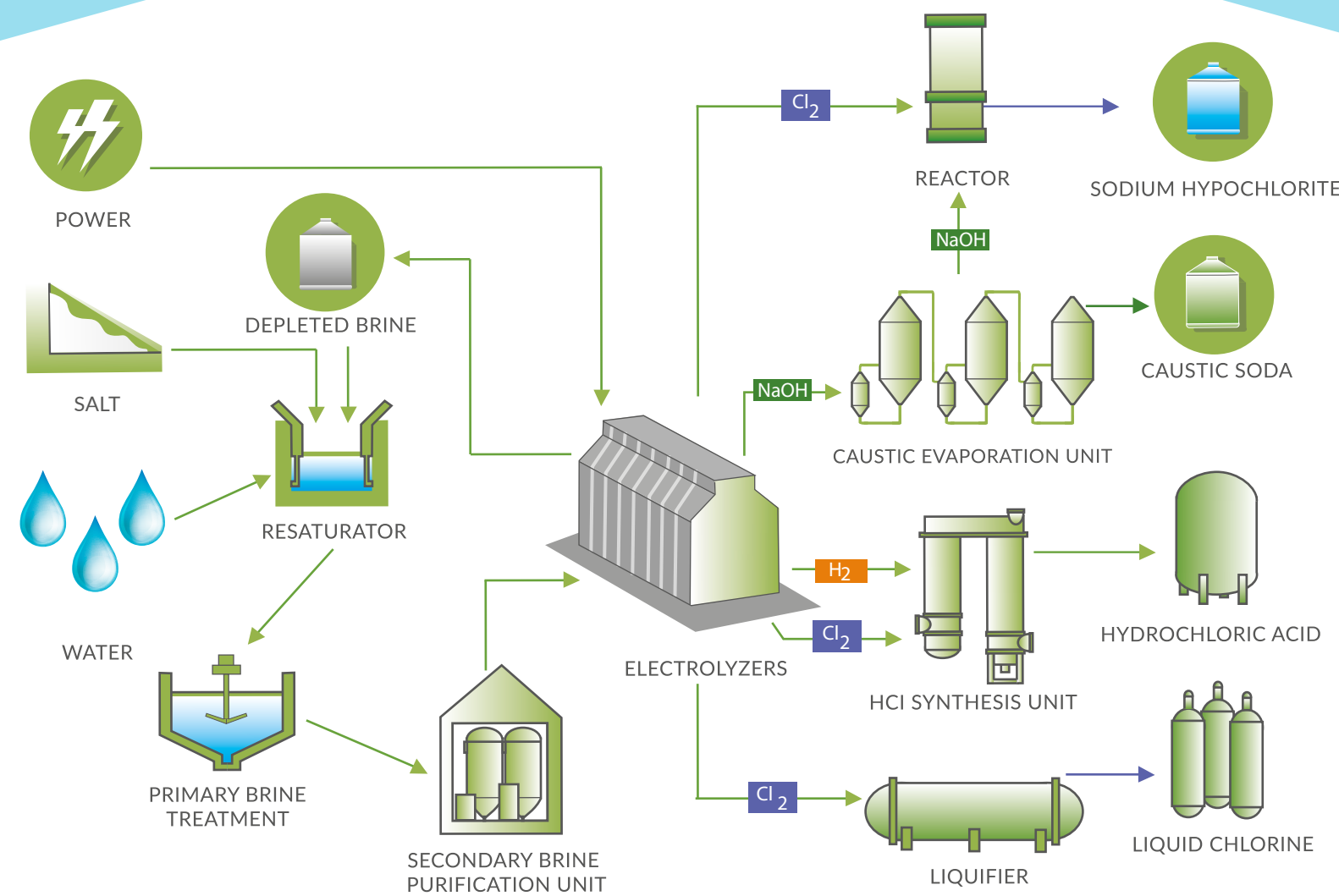
LIQUID CHLORINE (Cl <sub>2</sub> )	
% Purity as Cl <sub>2</sub> , minimum	99.50
Appearance: greenish-yellow to amber gas	
Odor: Irritating, pungent odor	

SODIUM HYPOCHLORITE (NaOCl)	
% Sodium hypochlorite (NaOCl), min.	7.10
Specific Gravity @ 30°C, min.	1.108
gpl Available Cl <sub>2</sub> , min.	75.00 (6.76% by weight)
% Excess NaOH, max.	1.00
% Sodium carbonate (Na <sub>2</sub> CO <sub>3</sub> ), max.	1.00
% Sodium chlorate (NaClO <sub>3</sub> ), max.	1.00
ppm Iron (Fe), max.	3.00
ppm Nickel (Ni), max.	1.00
Appearance: clear, pale yellow green liquid	

## Our Products & Their Applications



## Process Flowchart



## Process Description

Sodium Chloride salt is dissolved in water, and the resulting solution is purified in a two-stage brine treatment system. Ultrapure brine is electrolyzed in the ion-exchange membrane cells producing 32% caustic soda as well as hydrogen and chlorine gases. A multiple-effect evaporation system brings up the caustic soda concentration to 50% by weight.

Hydrogen and chlorine gases are burned together in a carbon combustion tower forming hydrogen chloride gas, an intermediate product that is absorbed in water to produce hydrochloric acid at 32% concentration by weight.

Part of the chlorine gas generated in the electrolyzer is diverted to the liquid chlorine plant where it is dehydrated, compressed, condensed and charged into steel cylinders.

A reaction of caustic soda and chlorine under controlled conditions produces sodium hypochlorite solution. To enhance its purity, the solution undergoes an elaborate filtration process.