

# GO GREEN WITH GAS CHLORINE

#### **OUR MISSION**

To educate operators, industry users and the general public about the benefits, safety and reliability of utilizing 100% pure chlorine gas for water disinfection.

To dispel myths and half-truths about the use of gas chlorine.

To keep decision making at the local level where people know best what works for them.

To keep water safety as the priority over misrepresented fears about gas chlorine.

Save Lives | Save Money | Save the Environment

## GO GREEN WITH GAS CHLORINE

For more information, please contact us:



1-888-280-0047 gcec@chlorinegas.org | www.chlorinegas.org

Cost Effective | Energy Efficient Environmentally Safe

Without water, we could not survive. Without water chlorination, we would not thrive.



#### **GAS CHLORINE**

saves fruits and vegetables from water contamination diseases and is trusted by many other industries for water disinfection and waste water treatment.



#### **GAS CHLORINE**

saves money by lowering operating, transportation and manufacturing costs.

### GO GREEN



is safe for the environment because of reusable cylinders that limit waste. The automotive, agricultural & solar energy industries are using chlorine to develop new technologies.



## AND SAVE

#### GAS CHLO-RINE

saves lives by making water purer and healthier to drink.



To fully understand the benefits of gas chlorine, it is necessary to have a clear understanding of the other commonly used methods of chlorination in comparison.

#### GAS CHLORINE

(Cl<sub>2</sub>)

- Obtained from natural salt or ocean/sea water
- 100% elemental Cl2
- Comes in cylinders, which are reusable
- Remains at full strength no matter how long it is in storage

#### CALCIUM HYPOCHLORITE

(Ca(OCI)2

- Available as granules or tablets
- 65% chlorine
- Degrades over time
- Containers are not reusable
- Loses strength once container is opened

#### SODIUM HYPOCHLORITE

(NaOCI)

- Water based solution of sodium hydroxide and chlorine, known as bleach
- Up to 15% chlorine and 7/8 water
- Comes in tanks and drums (not reusable)
- Degrades over time
- Can lose up to 50% of its potency in first 90 days

#### **GREEN: SAVES MONEY**

Gas chlorine costs less than 1/2 the price of other forms. Because bleach or granules are not 100% chlorine, the cost increases proportionately. It is important to evaluate true costs of all forms of chlorine on the basis of cost per pound of available chlorine.

Gas Chlorine contains 100% available chlorine per pound.

Calcium Hypochlorite contains 65% available chlorine per pound.

Sodium Hypochlorite contains approximately 12.5% available chlorine per gallon.

Based on chlorine content, it is necessary to feed different amounts of each to achieve the same disinfection level.

1 Pound of Gas Chlorine = 1.5 Pounds of Calcium Hypochlorite

1 Pound of Gas Chlorine = 10 Pounds of Sodium Hypochlorite

The result is a cost comparison that shows that gas chorine is clearly more cost-effective. In addition, equipment, transportation and operating costs must also be factored into cost equations, with the results showing that gas chlorine will reduce costs.

#### **GREEN: INDUSTRY TRUSTED**

Many industries use gas chlorine because they are "green" minded and it is efficient for their businesses.

Municipal & Industrial Water/Wastewater Facilities

Poultry, Dairy, Livestock

Meat & Seafood Processing

Fruit & Vegetables

Irrigation Systems

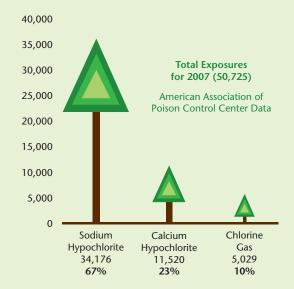
Nurseries and Farms

Beverage Bottling/Canneries

Swimming Pools/Theme Parks

#### **GREEN: SAVES LIVES**

To ensure public safety it is necessary for essentially all hazardous materials to be regulated; however, misinformation and lack of education have prevented regulations from being placed on calcium hypochlorite and sodium hypochlorite. Because the handling of these materials is less controlled, the results are reflected in the accidents that occur with their use. Gas chlorine is strictly regulated and education in training and handling is a priority, making it safer to use.



#### **GREEN: ENVIRONMENTALLY FRIENDLY**

When we talk about the environment, one of the first things that comes to mind is the importance of water as our greatest resource. We must be responsible when it comes to water disinfection. Recycling and efficiency are the ways of the future. Gas chlorine is housed in reusable cylinders which eliminates the problem of disposal and saves waste. Gas chlorine can also be easily removed prior to water being released into streams and rivers. We need to continue to educate the public about the benefits of using gas chlorine.

We need to think GREEN.
We need to use GAS CHLORINE.

#### **MAKE OUR WATER SAFE**



Today, we need to be aware and proactive when it comes to thinking about the future. We need to find ways to ensure that our children and grandchildren will have safe water to drink and healthy food to eat.

Although there are many misconceptions surrounding the use of gas chlorine, it is clearly the method of chlorination that provides the safest, most cost effective and efficient water disinfection available.

For more information and to get a better understanding of the benefits of using Gas Chlorine, contact us today.



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