

# Get to know the facts about Hydrochloric Acid

## What is hydrochloric acid?

Hydrochloric acid, also known as muriatic acid or spirits of salts, is a strong acid, with hundreds of commercial and industrial uses. You can purchase muriatic acid at most hardware and pool supply stores, where it is commonly available at 31.45% solution. While not an element, it is a naturally occurring compound, and is an important component of the gastric acid found in mammals, including humans.



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## How is it made?

Hydrochloric acid is created by dissolving hydrogen chloride in water. It is commonly produced at Chlor-Alkali facilities that create chlorine, sodium hydroxide and hydrogen, as hydrogen chloride is produced by combining chlorine and hydrogen.

## What does hydrochloric acid look and smell like?

Hydrochloric acid is a clear liquid, with a distinctive sharp odour.

## What is hydrochloric acid used for?

As a strong acid, hydrochloric acid has hundreds of applications and is found in many of the products used daily, from acting as an acidifier and food preservative, to being a key ingredient used to make PVC – the common plastic used in everything from household plumbing, to siding and flooring. It is also required for battery production, including EV batteries, and light bulb manufacturing. When sold as muriatic acid, the product is commonly used around the house to clean and descale tiles, but also to prep concrete for etching. It is used in pools and spas to help lower the pH levels.

For industrial use, hydrochloric acid is used during the manufacturing of steel, a process known as “pickling”. It is also used widely in chemicals used for water treatment. Other industrial uses include in the manufacturing of fertilizer, the processing of leather and the oil and gas industry.

## How is it transported?

Any hydrochloric acid that Chemtrade produces is in liquid form and is shipped using either railcars or transport trailers. All storing, loading and transport of hydrochloric acid is done under strict safety protocols.

- *When shipped using trailers or rail cars, hydrochloric acid is loaded in a secure area with mechanisms in place to catch and contain any potential spills, as well as emergency shut down processes should a spill occur.*



**What does a dill pickle, and the process of pickling steel have in common? Well, they both need hydrochloric acid in order to happen! Hydrochloric acid is used as both a preservative and acidifier in food storage, while in the industrial process of pickling steel, hydrochloride acid is used to remove impurities from the steel before further processing.**



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- *The trailers or rail cars are inspected before loading to ensure they are clean, and fully operational.*
- *The loading process is closely monitored to ensure there are no spills, and once complete, the units are again inspected to ensure they are sealed and fully operational before leaving site.*



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## What are the risks?

Chemtrade's first priority in all operations is safety. The safety of our employees, the community, and the environment. At every step, from production through to delivery to the customer, we ensure that the hydrochloric acid that we produce is being safely manufactured, stored, and shipped. All of our sites incorporate sensors that can detect leaks at levels as low as one part per million, and our employees regularly inspect our facilities to ensure everything, including railcars and transport trailers for shipping, are in proper working order.

Employees also participate in regular emergency response drills, so in the unlikely event of a spill or leak, they are trained in how to respond.

If you inhale hydrochloric acid fumes, you may experience several symptoms, like tightness in your chest, coughing, dizziness, and a shortness of breath. You should immediately move to an area of fresh air and seek medical aid if the symptoms do not go away, or if they worsen.

If hydrochloric acid comes into contact with your skin, including your eyes, you should immediately and continuously flush the area with fresh water for 15 minutes. If the skin affected blisters, or burns appear, or if the eyes are affected and there is a loss of vision, you should seek immediate medical attention.

*The Chemtrade facility in North Vancouver, BC produces the hydrochloric acid, along with chlorine, sodium hydroxide, and hydrogen.*

