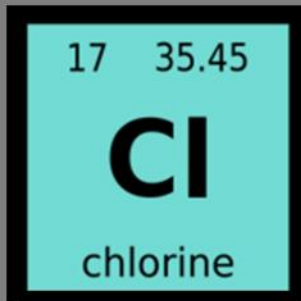


Free Reading Sample

Magical Elements

Element 17

Chlorine, Presented By Krystix, From The
Magical Elements of the Periodic
Table Book Series



Chlorine

By Sybrina Durant with Illustrations by Pranavva et al.

Krystix Presents Chlorine

This Element 17 book features the periodic table element, Chlorine. It is presented by Krystix, member of the Elemental Dragon Clan. Each dragon has a magical tail tipped with an element that gives them unique powers. Their powers are based on the properties of their element.

Antz is just one of the 118 elementals who will present all of the Magical Elements of the Periodic Table to readers who are curious about the wonders of the world.



Krystix introduces the very magical element, Chlorine, in his book.

The Elemental Dragon Clan and their other techno-magical friends are the perfect group to introduce you to metals and other elements in the Periodic Table. Hopefully, this Magical Element of the periodic table book will spark an interest in the magical and real world properties of all the metals and other elements known today. You may be surprised at how prominently they feature in our every day lives.

Each page in this book contains terms that might not be completely familiar to the reader. Refer to the definitions in the back of the book to get a clear understanding of each meaning.

There is also a fun elemental themed Periodic Table at the back of the book. It features 118 elements presented by fanciful characters like unicorns, dragons, wizards, knights and goblins.. They want you to remember that if there's no metal...there's no magic or technology.

Remember, "No metal – No Magic. . .and No Technology".

It's Techo-Magical.

Note: Sybrina Publishing websites are Sybrina.com and MagicalPTElements.com. Follow [sybrinapublishing](https://www.instagram.com/sybrinapublishing) on Instagram, [Magical Elements of the Periodic Table](https://www.facebook.com/MagicalElementsofthePeriodicTable) on Facebook, [@sybrinad](https://www.pinterest.com/sybrinad) on Pinterest, [Sybrina_SPT](https://twitter.com/Sybrina_SPT) on Twitter; and [Sybrina Durant](https://www.linkedin.com/in/SybrinaDurant) on LinkedIn.

Chlorine is a Halogen

Chlorine (Cl) was first recognized as a gaseous substance in 1630 in Brussels, Belgium. The true nature of Chlorine gas as an element was recognized in 1810 by English chemist Humphry Davy, who later named it Chlorine. The Greek word for "greenish-yellow" is khloros.

Chlorine is the 2nd lightest Halogen gas. It is greenish-yellow and has a very pungent smell.

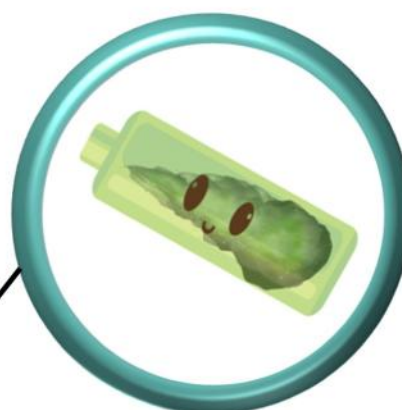
Chlorine is a non-metal element that acts as an electrical insulator in its pure gas, liquid, or solid forms. Because its electrons are tightly bound in covalent bonds rather than free to move, it cannot conduct electrical current. It is Diamagnetic and does not conduct electricity in pure forms.

Chlorine is a highly reactive gas that readily bonds with metals and non-metals to form stable compounds.

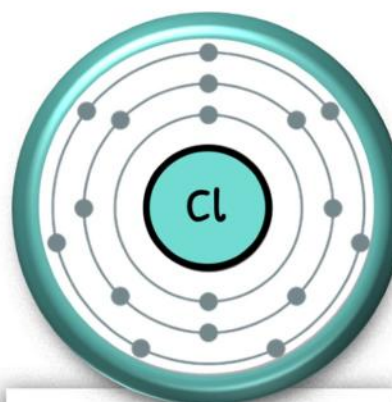
Chlorine is a Halogen, specifically classified in Group 17 of the periodic table. As a highly reactive nonmetal, it sits between fluorine and bromine.

LEGEND

Alkali Metals
Alkali Earth Metals
Transition Metals
Post-Transition (or Other Metals)
Metalloids
Non-Metals
Halogens
Noble Gases
Rare Earth Lanthanide Metals
Actinide Metals
Super Heavy—Radioactive



Chlorine Element



Atomic Structure

Halogens—Halogen chemicals are a special type of element. When they mix with metal, they become a kind of salt. Halogens are super reactive because they like to take an electron from metals. They can be found in column 17 of the element table. Some of them can be found in nature, but most are very dangerous and can hurt you if you touch them. They include fluorine, chlorine, bromine, iodine, and the radioactive elements astatine and tennessine.



Chlorine has had a long and important history. For many years, it was seen as a major breakthrough because it helped solve serious problems in public health and industry. One of its most important early uses was water cleaning. In the early 1900s, people learned that chlorine could kill harmful germs in untreated water. This helped lower the spread of diseases like cholera, typhoid fever, and dysentery. For many communities, this was a big step forward because safer water meant fewer illnesses and fewer deaths. Although some alternatives are in effect, it is still used for cleaning water today.

Chlorine was also used during World War I as a chemical weapon. This was one of the first times a chemical was used in war on a large scale. It caused great suffering and showed how dangerous such weapons could be. Because of this, countries later agreed to limit and ban chemical weapons through international rules and treaties. This helped move the world toward safer and more peaceful ways of dealing with conflict.

Even though chlorine has been very useful in the past and today, many of its old uses are no longer preferred. One reason is that chlorine can create harmful byproducts when it is used in water treatment. Some of these byproducts may be risky to human health and can also hurt fish and other living things in water. Over time, people have become more aware of these problems, so they now look for safer choices.

Another problem is that chlorine can damage pipes and other equipment. When it is used often, it may cause metal parts to wear down faster. This can lead to leaks, repairs, and higher costs. It can also affect the overall quality of water systems. Because of this, many places now want methods that are gentler on their buildings and equipment.

Chlorine is also not as effective as it once was against some germs. A few harmful organisms, such as Cryptosporidium and Giardia (both diarrheal diseases), can survive chlorine treatment better than other germs. This means chlorine alone may not always give full protection. As a result, water systems often need stronger or more modern methods to make sure water is truly safe.

Because of these concerns, better options have been developed. In water treatment, methods like ultraviolet light, ozone, and membrane filters are now used in many places. These methods can remove or kill many harmful germs without creating as many unwanted byproducts. They can also help protect pipes and other equipment. For this reason, they are becoming more common in modern water systems.

The use of chlorine as a weapon has been strongly restricted. International agreements now ban the making, storing, and using of chemical weapons. These rules support peace and encourage countries to solve problems through discussion instead of violence. This has helped reduce the chance of chlorine being used in such a harmful way again.

Uses For Chlorine



Although there are many other products for cleaning, chlorine bleach is still the most commonly used disinfectant and whitening agent for fabrics. It works fast and is cheap, which makes it a popular choice for sanitizing and brightening white clothes. However, it can damage fabric fibers and may harm the environment if used too often. Other common options include hydrogen peroxide, oxygen-based bleach, baking soda, and white vinegar for safer cleaning tasks.

Chlorine is still an important part of cleaning sewage and industrial waste despite the fact that there are other options. It is widely used because it is affordable, easy to apply, and very effective at killing harmful germs. Chlorine is usually added as a liquid or gas. Even though methods like UV light and ozone are available, chlorine is often preferred because it destroys pathogens well and leaves a lasting disinfecting effect.



The Source of Chlorine



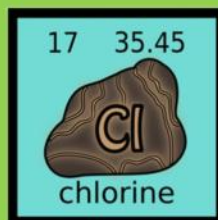
The main source that Chlorine comes from is a salt called Halite (Sodium Chloride - NaCl). It is found in very dry places with lots of salt flats - like deserts.

Chlorine is a chemical element with the symbol "Cl" and atomic number "17". It is widely used in modern life, especially in water treatment, cleaning products, and the manufacture of plastics and other industrial chemicals. In its pure form, chlorine is a greenish-yellow gas with a sharp, irritating smell, so it must be handled carefully. Although most people know chlorine for its role in disinfecting water, it is also a valuable raw material in many manufacturing processes.

Chlorine is not usually found in nature as a free element. Instead, it is obtained from "salt", especially from a mineral called "halite", also known as rock salt. Halite is made mostly of "sodium chloride", the same compound found in table salt and in seawater. Many large salt deposits were formed millions of years ago when ancient seas evaporated and left thick layers of salt behind. These deposits are found in underground mines or close to the Earth's surface in many parts of the world.

To produce chlorine, salt must first be extracted from these deposits. This can be done by "mining" the rock salt directly, using methods such as drilling, cutting, or blasting. In other cases, water is pumped underground to dissolve the salt, and the resulting salty water, called "brine*", is brought back to the surface. The salt is then crushed, cleaned, and prepared for chemical processing.

Krystix Presents Chlorine



Did You Know?

More than 2,000 naturally-occurring chlorine-based compounds have been identified in all kinds of organisms and places, including the human body. The most common is sodium chloride, most commonly known as "table salt".



- Chlorine was first made and seen as a separate gas in 1774 by the Swedish chemist Carl Wilhelm Scheele. He thought it was a gas containing oxygen. Earlier people, such as Jan Baptist van Helmont in the 1630s, may have seen similar gases, but Scheele studied it carefully. He called it "dephlogisticated muriatic acid air." In 1810, the English chemist Humphry Davy showed that chlorine was really an element. He proved it could not be broken into simpler parts, so it was not a compound but a true element.
- In 1810, English chemist Sir Humphry Davy gave the element chlorine its name. He based it on the Greek word "khloros" (χλωρός), which means "pale green," "greenish-yellow," or "yellowish-green." Davy picked this name because it matched the gas's color. Chlorine is known for its yellow-green look, which helped make the name easy to remember.
- Chlorination is one of many methods that can be used to disinfect water. This method was first used over a century ago, and is still used today to combat waterborne diseases. The use of Chlorine has proven effective against bacteria and viruses and makes our water safer.
- Chloride is an ion of chlorine. It occurs when a chlorine atom gains one electron which forms a negatively charged ion. Despite its toxicity, the chlorine ion, chloride, is the ninth most abundant element in the human body. It is essential for human nerve function because it regulates the excitability of neurons and enables efficient nerve impulse transmission. Most chloride in our diets come from salt.

Krystix

The Dragon With The Keen Chlorine Tipped Tail

Symbol: Cl Atomic Number: 17 Atomic Mass: 35.45

Chlorine resides in Group 17 Period 3 on the Periodic Table.
The Atomic Symbol is Cl. Its Atomic Number is 17. Its Atomic Mass is 35.45.

Magical Elements of The Periodic Table

Remember, "No Metal—No Magic."
...And no technology.

Magical elements from the Magical Elements of the Periodic Table books present all of the elements of the periodic table in fantastical and real life terms.

In the books, each elemental character has magical powers based on the properties of the elements that come from the land, air and water. They are the perfect group to introduce you to metals, metalloids, non-metals, halogens, noble gases and much more.

Unicorns, dragons, alchemists, knights, and goblins will show you how people of this world always have and always will depend upon the elements that our earth provides for all of our needs.

Use this Periodic Table as you would any other to spark an interest in the magical and real world properties of all the elements known today. You may be surprised at how prominently they feature in our every day lives.

No Metal

Actinium To Zirconium

No Magic

18

He
Helium
Balloons

1 H Hydrogen
Table Manufacturing

2 Li Lillian
Batteries

3 Na Born
Salt

4 Ca Calcium
Teeth

5 Sr Straws
Computer Screens

6 Cs Cesium
Cancer Treatment

7 Fr Francium
Radioactive

17 35.45

Cl

chlorine

Krystix

Swimming Pools

13 B Boron
Charcoal

14 C Carbon
Diamond

15 N Nitro
Food Preservatives

16 O Oxy
Air

17 Cl Chlorine
Swimming Pools

18 Ar Argon
Light Bulbs

It's Techno-Magical

LEGEND

- Alkali Metals
- Alkali Earth Metals
- Transition Metals
- Post-Transition (or Other Metals)
- Metalloids
- Non-Metals
- Halogens
- Noble Gases
- Rare Earth Lanthanide Metals
- Actinide Metals
- Super Heavy—Radioactive

EXAMPLE OF A COMPOUND

Quincy Quick Lime = CaO

Used for Concrete

Both Carbon and Oxygen are reactive nonmetals.

EXAMPLE OF AN ALLOY

White Wing White Gold = NiCuAgZnAu

Includes 58.5% gold, 22% copper, 8% zinc, 1% nickel, 4.5% silver and possibly other elements.

Used for jewelry, dental amalgams plus connectors, and switch and relay contacts for electronics.

Sybrina.com

Meet Kyrstix, The Dragon with a Magical
Tail Tipped with Chlorine

No Metal

Kyrstix

17	35.45
	
chlorine	



No Magic

The morning sun peeked over the tall mountains, painting the sky with shades of pink and orange. Krystix woke up slowly. He took a deep breath. The air smelled like fresh rain and sweet pine needles. He stretched his long, powerful body. His bright green scales caught the morning light. They shined like wet leaves in the summer. Krystix was a dragon, but he was not a scary monster. He was a guardian. He loved to learn new things, solve tricky puzzles, and help anyone who was in trouble. His big yellow eyes were full of kindness and smarts.

Krystix lived in a beautiful, quiet forest. The birds sang to him, and the deer were not afraid to walk right past his tail. But on this day, Krystix felt worried. He was thinking about a dark rumor he had heard from the wind. The wind whispered that a terrible sickness was spreading in a valley far away. The rivers there were turning black. The dirt was turning sour. The animals were running away. Krystix knew he had to help. He had a very special kind of magic. He did not breathe fire that burned things down. Instead, he could make a special, glowing green mist called chlorine. This magic could clean up poison and heal the broken land.

Just as he was thinking about this, he heard a crunching sound. Someone was walking on the dry leaves. Krystix looked up and saw a human walking out from the shadows of the tall trees. It was a hunter. Her name was Kira. She wore a thick brown cloak, and she carried a wooden bow on her back. Her boots were covered in gray mud, and she looked very tired. But her eyes were brave.

"I have been looking for you, dragon," Kira said. Her voice was shaking just a little bit. "I need your help. The valley to the north is sick. The land is broken, and the people are in great danger."

Krystix gave her a warm, gentle smile. He lowered his big, horned head so he could look right into her eyes. "Stories can have happy endings, traveler," he said softly. "But sometimes we have to work hard to write those endings. Let us go fix this one together."

Krystix lowered his big green shoulder. "Climb up," he told her.

Kira looked surprised, but she did not wait. She grabbed his thick green scales and pulled herself onto his wide back. She found a safe spot to sit right between two large, smooth spikes on his neck.

"Hold on tight," Krystix warned. With a mighty flap of his giant wings, Krystix jumped into the sky.

Kira gasped. She had never been flying before! Krystix's wings whooshed against the air. They went higher and higher. Kira held on tight as she rode with him on the wind. The cold air rushed past her face, making her cheeks turn red. She looked down and saw the world below. The trees looked like tiny green bushes. The rivers looked like little silver ribbons. It was beautiful.

But as they flew further north, the view changed. The bright green forest faded away. The sky turned gray and cloudy. The air no longer smelled like pine trees; it smelled like rotten eggs and rust. Kira pointed down. "Look! Down there!" she shouted over the loud wind.

Enjoy This Coloring Page Featuring
Krystix The Dragon with the Chlorine Tipped Tail



Magical Elements of The Periodic Table

Create Your Own Magical Dragon Elemental

Krystix

The Dragon With The Keen Chlorine Tipped Tail

Symbol: Cl Atomic Number: 17 Atomic Mass: 35.45



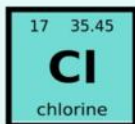
Magical Clan Crest Symbol



Halogen



Atomic Structure



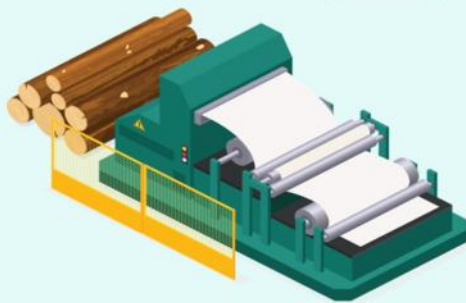
Chlorine is extracted from Halite



Chlorine Periodic Symbol

Krystix's Magical Abilities

- The tiniest tap of Krystix's Chlorine tipped tail purifies any water it comes in contact with.



[Empty rectangular box for name or title]

Symbol:

Atomic Number:

Atomic Mass:

[Empty rectangular box for symbol]

Magical Clan Crest
Symbol

[Empty circular box for crest symbol]

[Empty rectangular box for crest symbol]

[Empty circular box for crest symbol]

Atomic Structure



[Empty rectangular box for crest symbol]

[Empty circular box for crest symbol]

[Empty rectangular box for crest symbol]

[Empty circular box for crest symbol]

[Empty rectangular box for crest symbol]

Magical Abilities

[Large empty rectangular box for magical abilities]

Uses For

[Empty rectangular box for uses for]

I hope you enjoyed this sample



**The book is available in PDF and Soft Cover Formats.
Learn more about it at magicalptelements.com**

Sybrina Publishing

**If you love the book,
please spread the word to teachers,
home schoolers and anyone else who might enjoy it.**