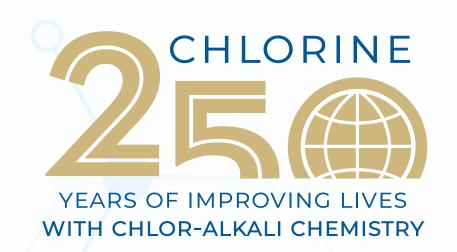
250 years of improving lives with chlor-alkali chemistry This year marks the 250th anniversary of Karl Wilhelm Scheele's discovery of

of Karl Wilhelm Scheele's discovery

chlorine: a significant milestone in the history of chemistry.

Together with its co-products sodium/potassium hydroxide (caustic soda/ potash) and hydrogen (collectively known as chlor-alkali), this basic chemistry is the foundation of a modern industry, shaping products and technologies that have contributed to public health, industrial growth, and sustainability.



The World Chlorine Council is leading the way

Who is working to make these advancements a reality? The World Chlorine Council (WCC) and its regional membership. Founded in the early 1990s by the US and Europe associations, WCC is a global chlor-alkali network bringing together six regional associations, all founded in just over 100 years.

Here is a short history of this fascinating chemistry!

Holding
regular global safety
workshops since 2002
to promote the continuous
improvement of safety
practices worldwide in the
production, transportation
and use of chlor-alkali

Providing
resources to help
communities safely use
bleach to battle hepatitis
A, norovirus, COVID-19,
dengue fever and
Monkey Pox.

Promoting safe clean drinking water at Water Forums in India in 2015, South Africa in 2019 and Latin America in 2023.

Showing the benefits of chlor-alkali with chlorine and caustic soda 'trees' via the worldchlorine.org website and @ChlorineWorld LinkedIn and X accounts.

Participating in
World Summits
and UN Conferences
on Sustainable
Development.

Contributing to global guidance on Waste and High-Production Volume chemicals.

Chlorine is discovered
Karl Wilhelm Scheele discovers chlorine

Electrolysis of salt water to produce chlorine and sodium hydroxide (caustic soda) is demonstrated

First small-scale use in bleach, soap and textiles

Large-scale alkali production processes are developed

New processes enable large-scale production of alkali for glass, textiles and soap and then for the chemical industry

Further upscaling during the century for even more bleach, soaps and detergents

century

Chlorine plays a key role in water sanitation

revolutionizing public health through the reduction of waterborne diseases Chlorine first used to treat the water supply of a town (Maidstone, England) [1897]

Chlorine first used to treat the water supply of a city (Jersey City, USA) [1909]

First regular treatment of swimming pool water (Brown University, Rhode Island) [1910]

19th-20th centur

Innovative applications for chlor-alkali expand

Chlor-alkali is a

major contributor

to sustainable

solutions

Polyvinyl chloride (PVC) developed for pipes, construction materials, packaging, and even medical devices such as blood bags

Strong synthetic fibres such as nylon and Kevlar®

Polyurethane for insulation, coatings, and foams

Pharmaceuticals, where chlorine is used in the production of over 85% of modern medicines such as antibiotics, painkillers and antiseptics

Chlor-alkali materials help make solar panels, wind turbines, and electric vehicle batteries

Chlorine continues to play a vital role in water

Chlorine continues to play a vital role in water sanitation and particularly in developing regions where access to clean water is limited, to help meet global sustainable development goals

Advances in technology enable even more recycling of PVC

Hydrogen, one of the key products generated during the chlor-alkali process, gains importance as a clean energy carrier

21st century

Participating in UN
Water Conferences in
2023 and supporting
annual World Water and
World Oceans Days.

Supporting
the UNEP Global
Mercury Partnership and
Minamata Conventions
since 2016 to phase out
mercury in chlor-alkali
by 2025.

Sharing of safety incidents and best practice guidance at every WCC meeting and in newsletters.

Communicating
on how chlor-alkali helps
the UN Millennium
Development Goals and
UN Sustainable
Development Goals.

Collaborating with
global organizations
such as the Strategic
Approach to International
Chemicals Management (SAICM),
World Health Organization
(WHO) and Organisation for
Economic Cooperation and
Development (OECD).

COMMUNICATION CONTRIBUTION CONTRIBUTION OF CONTRIBUTION ON Persistent Organic Pollutants (POPs).

Publishing a Sustainability Report since 2002.