



Safe and sound: The many applications of Bromine



What is Bromine?

Naturally occurring element found in seawater, salt lakes, inland seas and brine wells, Bromine is considered one of the 28 chemical elements essential for human life.

Its versatile and protective features help make a wide range of products and materials safer and more durable. Some of Bromine's most beneficial applications include:



Fire Safety

Brominated flame retardants delay or inhibit fire ignition



Water Treatment

Bromine solutions purify and disinfect pools, wastewater and drinking water, among others



Energy Storage for Batteries

Bromine-based electro-chemical energy storage technologies help accelerate the green energy transition



Pharmaceuticals

Bromine-based ingredients soothe and treat many health issues, including seizures, heart problems, and pneumonia, and are used widely in diverse active pharmaceutical ingredients and intermediates



Agriculture

Bromine solutions help protect produce and soils from infestation

The Bromine sector at a glance



Bromine is only found in **inorganic or natural organo-bromine compounds**



Bromine compounds can be found in natural sources such as **soil, salt, and seawater**



More than **50%** of the world's bromine comes from the Dead Sea



Strict safety and environmental standards apply



Flame retardants represent the largest application area for bromine



In 2022, the global flame retardants market amounted to **≈ \$7.16 Billion** and is expected to reach **≈ \$10.63 Billion** by 2030¹

Who is BSEF

BSEF is the International Bromine Council, representing the bromine technology industry globally. We share knowledge on the benefits of bromine and bromine-based technologies both for society and the economy. We work to promote the safe use and handling of bromine as an essential contributor to a sustainable future.

With representative offices in Asia, Europe and North America, BSEF also serves to support its members and market organizations in their engagement with policymakers and regulatory authorities globally.

BFRs for a fireproof future

The growing global flame retardants market highlights the importance of fire safety to prevent injuries and trauma, protect property and save lives, while ensuring extended product lifecycles contributing to sustainability.

BFRs are essential to many sectors:



Building and construction



Electrical and electronic equipment



Furniture, upholstery, and textile



Transport

BFRs will become increasingly essential in coming years due to key factors and trends, including:

- Ever more **EEE²** in households
- Vulnerability of **ageing populations³**
- Transition towards **electrification**
- Urbanisation and **high population density**



Learn about the essential use of BFRs here

Who are BSEF's members?

Together, BSEF members represent about **80% of the bromine market.**



¹ Flame Retardants Market Share, Size, Trends, Industry Analysis Report, By Type, By Application, By End-Use, By Region, Segment Forecast, 2022 - 2030

² Electrical and Electronic Equipment

³ In 2022, more than one fifth (21.1%) of the EU population was aged 65 and over, and this is increasing