

Is East African arsenic flame retardant



Overview

Arsenic is a ; it has As and 33. It is a and one of the, and therefore shares many properties with its neighbors and. Arsenic is notoriously. It occurs naturally in many, usually in combination with and metals, but also as a pure elemental. It has various, but only the grey form, which has a metall.

AI Overview

Arsenic, including that found in East Africa, can form compounds historically used as flame retardants, but elemental arsenic itself is not inherently flame-retardant. Arsenic Chemistry and Flame Retardant Use Arsenic is a metalloid that forms a variety of compounds, including arsenates and arsenites, which have been used in the past as flame-retardant additives in textiles, wood, and plastics due to their ability to inhibit combustion and promote char formation when heated . These compounds act by interfering with the chemical reactions that sustain flames, often releasing non-flammable gases or forming a protective layer on the material surface . Elemental Arsenic vs. Arsenic Compounds Elemental arsenic, such as grey arsenic, is brittle and flammable under certain conditions, and therefore does not function as a flame retardant on its own . Flame-retardant properties are specific to certain arsenic compounds, particularly inorganic arsenates like calcium arsenate or lead hydrogen arsenate, which have historically been incorporated into materials to reduce flammability . Regional Considerations Arsenic found in East African groundwater or surface water is primarily a public health concern due to its toxicity rather than its flame-retardant properties . The presence of arsenic in the environment does not automatically confer flame-retardant characteristics to materials unless it is chemically processed into specific arsenic compounds designed for that purpose. Safety and Environmental Concerns Arsenic compounds are highly toxic an...

Article Content

Flame Retardants, Their Beginning, Types, and ...

This review will focus on the most critical developments that flame retardants have experienced and their impact on the environment and health through their types and mechanism of

Critical review of the analysis of brominated flame retardants and ...

Abstract World-wide, the prevalence of brominated flame retardants (BFRs) is well documented for routine analysis of environmental and biological matrices. There is, however, limited

NTP Review of Halogenated Flame Retardants

Halogenated flame retardants are widely detected in human biological sampling due to continued exposure to contaminated product, their persistence

Legacy and Emerging Flame Retardants as

Environmental pollution from flame retardants (FR) has attracted increasing attention from the public and scientific community. Aside from well

Polybrominated diphenyl ethers and alternative flame retardants in air ...

Polybrominated diphenyl ethers and alternative flame retardants in air and precipitation samples from the northern Lake Victoria region, East Africa. by Kenneth Arinaitwe, Derek C G Muir,

Occurrence, distribution and ecological risk assessment of ...

Abstract The occurrence, distribution and ecological risk assessment of twelve (12) organophosphorus flame retardants (OPFRs) were investigated in sediments from the Vaal River,

Flame retardant

While non-organic fabrics are typically made flame-resistant by incorporating flame retardants into their matrices, surface modification is more convenient for organic fabrics like cotton.

Development of a Flame Retardant and an Organohalogen Flame

The flame retardant and organohalogen flame retardant inventories were developed as a resource for scientists interested in better understanding properties of flame retardant and

Flame Retardants

For decades, furniture, baby products and electronics have been loaded with needless flame retardants linked to cancer, hormone disruption, and childhood

Polybrominated Diphenyl Ethers and Alternative Flame Retardants in

Atmospheric concentrations of polychlorinated biphenyls, brominated flame retardants, and novel flame retardants in Lagos, Nigeria indicate substantial local sources.

Arsenic in African Waters: A Review

The review of studies on arsenic in African waters shows that arsenic can be found in high concentrations in both surface water and groundwater. Arsenic concentrations in African

Middle East and Africa Flame Retardant Material Market ...

The Middle East and Africa Flame Retardant Material Market is witnessing notable expansion due to heightened fire safety regulations and increased awareness regarding building

Middle East & Africa Flame Retardants Market Forecast to 2031 ...

Middle East & Africa Flame Retardants Market Overview Increasing government initiatives and investments in charging infrastructure foster the penetration of vehicles in the Middle East and Africa.

Exposure of urban population to organophosphate esters and novel ...

This study provides the first quantitative assessment of organophosphate esters (OPEs) and novel brominated flame retardants (NBFRs) in indoor dust from Ugandan households,

Middle East & Africa Flame Retardants Market Forecast to 2031 ...

Middle East & Africa Flame Retardants Market Forecast to 2031 - Regional Analysis - by Type and End-Use Industry (Building and Construction, Automotive and Transportation, Electrical

Middle East And Africa Flame Retardant Market Size, Share & Growth ...

Other Key Findings Middle East And Africa represented 11.97% of the global Flame Retardant Market size in 2024. By 2033, United States is estimated to hold the largest position in the global market in

Middle East & Africa Flame Retardants Market Size

Rising Demand for Green Flame Retardants Bolster Middle East & Africa Flame Retardants Market The emerging demand for green flame retardants is shaping

Exposure of urban population to organophosphate esters and novel ...

Abstract Indoor environments are critical exposure pathways to flame retardants, yet data from Africa remain scarce. This study provides the first quantitative assessment of organophosphate

Origin of Fluoride and Arsenic in the Main Ethiopian Rift Waters

In the Main Ethiopian Rift (MER) area, rural populations often use water that exceeds the World Health Organization thresholds for fluoride (F-) and arsenic (As), two elements that are

Arsenic in Africa: potential sources, spatial variability, and the ...

Arsenic (As) is a metalloid (group VA), classified as a toxic element that threatens human health.

Probing Legacy and Alternative Flame Retardants in the

An increasing number of alternative flame retardants (FRs) are being introduced, following the international bans on the use of polybrominated

The Applications of Flame Retardants; Types and Characteristics for ...

Fire retardants and flame barriers have a significant impact on the ignition characteristics of the foam and however, once the material starts burning, the fire retardants have a much more limited effect on

Middle East & Africa Flame Retardants Market

The Middle East & Africa flame retardants market was valued at US\$ 210.16 million in 2023 and is expected to reach US\$ 289.64 million by 2031; it is estimated to register a CAGR of 4.1% from 2023

Groundwater for Sustainable Development

Arsenic (As) is a metalloid (group VA), classified as a toxic element that threatens human health.

Flame Retardants | UNEP

They have been used in many consumer and industrial products, since the 1970s, to decrease the ability of materials to ignite. Inorganic and organic flame retardant have been used.

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For more information, pricing, or custom solutions, please contact us:

Website: <https://www.introspec.co.za>

Email: info@introspec.co.za

Phone: +27 73 849 2156

Address: 25 Riebeek Street, Cape Town, 8001, South Africa

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