

# Health & Safety Product Data Sheet (IBAA)

## Identification of Substance

- a) Substance – Incinerator Bottom Ash Aggregate (IBAA)
- b) Producer – Blue Phoenix Limited

## Composition

IBA is the product of energy recovery at a range of temperatures from 800-1100°C, primarily from domestic and municipal wastes. In addition to fused and partially fused clinker, concrete, brick, ceramics there might be sharp metal objects, glass and a small quantity of partially burnt material.

Once the IBA is processed the majority of the metal fraction is separated from the aggregates and they are sized accordingly.

IBAA presents no known biological hazards.

## Hazards Identification

- a) Incinerator Bottom Ash Aggregate – contact with IBAA may cause: -

- 1. Irritant Contact Dermatitis
- 2. Allergic Contact Dermatitis

Always avoid manual handling without the appropriate PPE as cuts, skin piercing, and abrasions can occur.

- b) When the respirable dust contains silica, the risks are increased. Extended periods of exposure to high concentrations of any dust can be hazardous to health. IBAA contains trace elements, which are considered negligible in light of current knowledge. Very low levels of dioxin may be found in the processed aggregates, which are below known background levels (e.g. garden soils), and therefore in view of current information are not considered a significant health hazard.

IBAA Dust – cutting and surface treatment of materials produced from IBAA can create dust and flying fragments. The dust created could contain particles of respirable silica. Further advice on the silica content of IBAA is available via the head office upon request.

- c) IBAA may release hydrogen for a period depending on site conditions.

## First Aid Measures

- a) Inhalation – remove those affected, to fresh air.
- b) Skin contact – wash with water.
- c) Eye contacts – immediately irrigate with copious amounts of water and seek medical attention.

- d) Ingestion – drink clean water
- e) Skin abrasions – wash with clean water and seek medical attention where necessary

### **Fire Fighting Measures**

None needed when used as recommended.

### **Accidental Dust Release Measures**

Damp down any dry excessive dust. Wear dust masks/respirator and goggles as specified when conditions dictate. See Exposure Controls/Personal Protection. For further information.

### **Environmental Measures**

Prevent entry into drains and watercourses.

The accidental release of dust into the environment - monitoring has shown that no significant hazard is likely. Blue Phoenix has achieved ISO 14001 accreditation and operate an extensive dust management plan throughout the business to mitigate any potential impact on the environment.

### **Handling, Storage and Placement**

The product should be handled using tools or mechanical methods where possible as opposed by hand, to avoid skin abrasions, or cuts from sharp objects. Engineering control measures such as containment, enclosed hoppers, local exhaust ventilation should be considered when airborne dust exposure levels are approached. However, damping down is an effective means of controlling dust.

**Hydrogen release potential:** Storage or placement of IBAA should be in a well-ventilated area as there is potential for Hydrogen gas to be released particularly when the IBAA is in a relatively high moisture content and high pH condition. When blending IBAA with highly alkaline materials or products (cement for example), care should be taken to ensure good ventilation as some inflammable gases may be produced.

Voids or free space in structures constructed in or immediately above IBAA must be either impervious to hydrogen ingress, or well ventilated to prevent possible hydrogen containment. Hydrogen is much less dense than air and readily vents to atmosphere.

Further guidance is available from:

BS 8485: 2015 Code of Practice for the design of protective measures for methane and carbon dioxide ground gases in new buildings.

Building Research Establishment 2015. Radon: guidance on protective measures for new buildings. BR211.

CIRIA 2007. Assessing risks posed by hazardous ground gases to buildings. CIRIA Report C665

CIRIA 2014. Guidance on the use of plastic membranes as VOC vapor barriers. CIRIA Report C748

CIRIA 2014. Good practice on the testing and verification of protection systems for buildings against hazardous ground gases. CIRIA Report C735

**For those constructing or working in enclosed spaces** please follow the HSE link to guidance for safe working in enclosed spaces:  
<https://www.hse.gov.uk/pubns/indg258.pdf>

### **Exposure Controls/Personal Protection (EH40)**

Workplace exposure limits	WEL (8hr TWA)
Total Inhalable Dust	10mg/m <sup>3</sup>
Respirable Dust	4mg/m <sup>3</sup>
Respirable Silica	0.1mg/m <sup>3</sup>

Engineering Control Measures: as per section 7, Handling and Storage.

### **Personal Protection:**

Appropriate personal protective equipment should be worn when working with IBAA.

### **Physical and Chemical Properties**

The aggregate contains a wide range of elements, which do not present a hazard when used as directed. Extensive research into the leachate properties of IBAA shows that this is not a risk to the environment when used as an aggregate in hard water conditions.

The material has an ultimate pH of between 8-9. Heat may be apparent when opening stockpiles due to ongoing hydration of the aggregate. A slight odor may be apparent, but this again presents no threat to operatives or the environment. Hydration of the IBAA can continue for some time, advice should be taken when using IBAA in an enclosed environment (see handling and storage).

Note that this product does NOT **contain** incineration air pollution control residues (APCR), which are classified as Hazardous Waste.

### **Stability & Reactivity**

Not applicable.

### **Toxicological Information**

Health Effect: -

**By inhalation:** Inhalation of large quantities of respirable silica could lead to lung damage.

#### **Ingestion reports**

Exposure to high levels of silica dust can cause progressive lung damage.

### **Disposal Considerations**

Appropriate Waste Regulations must be adhered to.

## **Transport Information**

Follow the Waste Duty of Care Code of Practice.

## **Regulatory Information**

**Hazard Label Data:** This product is **NOT** classified as dangerous for supply in the UK.

**Statutory Instruments:** Health & Safety at Work etc. Act 1974  
Consumer Protection Act 1987  
Environmental Protection Act 1990  
COSHH 2002

**Guidance Notes:** Occupational Exposure Limits (EH40)  
Local Exhaust Ventilation (HS(G)37)  
Crystalline Silica EH59  
Dust, general Principles of Protection (EH44)  
Control of Respirable Crystalline  
Silica in Quarries (HS(G)73)  
Waste (E&W) Regulations 2011–1

The above publications are available from HMSO or HSE.

## **Other Information**

The data and advice given above apply when the substance is used as intended. Use of the substance for other applications may give rise to risks not mentioned.

The information contained within the Safety Data Sheet does not constitute the owners own assessment of risk as required by other Health and Safety legislation i.e. COSHH 2002, MHSWR 1999.

If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to secure that any person handling or using the product is provided with the information on this sheet.

If you are an employer, it is your duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

Further copies of this Data Sheet may be obtained from the following [www.bluephoenix-group.com](http://www.bluephoenix-group.com) or alternatively you can contact Blue Phoenix UK, 1 Victoria Stables, Essex Way, Bourne, Lincolnshire, PE10 9JZ. Telephone 01778 423345