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BONE ASH

Safety Data Sheet

In compliance with Regulation (EC)1907/2006,
Regulation (EC) 1272/2008 and Regulation (EC) 453/2010 Date of issue:
03/03/2011 Revision date: 21/03/2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1. Product identifier

Product form : Substance

Product name : Tricalcium phosphate

EC no : 2704235

CAS No. : 68439-86-1

REACH registration No. : 05-2116457329-36-0000

Synonyms : None

The product is cattle bones which have been degelatinised to remove fats and protein, then calcined at >1000 °C in an oxidising atmosphere to produce tricalcium phosphate $Ca_3(PO_4)_2$

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation:

- As a flux in Ceramic bodies and glazes

1.2.2. Uses advised against

- None

Full text of use descriptors: see section 16.

1.3. Details of the supplier of the safety data sheet

Keramikos

Oudeweg 153

2031 CC Haarlem

1.4. Emergency telephone number

023 – 542 44 16



www.keramikos.nl

BONE ASH

Safety Data Sheet

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SECTION 2: Hazards identification.

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical and chemical hazards: Not classified

Human health: Irritant cat 2 – H315 & H319

Environment: Not classified

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Full text of R-phrases: see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 CLP)

Signal Word Warning Hazard statements

H302 Harmful if Swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 Dry dust may cause respiratory irritation.

Precautionary statements

P260 Do not breathe dust

P280 Wear protective gloves/eye protection

P301/314 If swallowed get medical advice/attention if you feel unwell



SECTION 3: Composition/information on ingredients.

3.1. Substances

Chemical name	CAS No.	EC-No.	%	Classification	Classification
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BONE ASH

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Tricalcium phosphate (Bone Ash)	68439-86-1	2704235	>100	(67/548/EEC) N/A	(1272/2008/EC) N/A
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SECTION 4: First aid measures.

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing. Eye contact: Make sure to remove any contact lenses from the eyes before rising. Rinse eye with water immediately. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation: May cause coughing

Ingestion: May cause indigestion

Skin contact: No specific symptoms noted.

Eye contact: May cause acute redness of the eyes

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures.

5.1. Extinguishing media

Suitable extinguishing media: Use media suitable for the surrounding fire
Unsuitable extinguishing media: None

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable.

Explosion hazard: No explosive properties known.

Reactivity: Stable under normal conditions of handling and storage.

5.3. Advice for firefighters

Protection during firefighting: No specific fire fighting procedures given.



www.keramikos.nl

BONE ASH

Safety Data Sheet

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SECTION 6: Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1. For non-emergency personnel No additional information available

6.1.2. For emergency responders No additional information available

6.2. Environmental precautions

Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Precautions for safe handling: Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packagings: Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene measures: When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2



www.keramikos.nl

BONE ASH

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SECTION 8: Exposure controls/personal protection.

8.1. Control parameters

Exposure Limits:

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust).

WEL = Workplace Exposure Limit.

Chemical Name	STD	TWA-8 Hrs	Stel 15 mins
Inorganic Dust	WEL	4mg/m3 resp dust	
Kaolin	WEL	2mg/m3	
Quartz	WEL	0.1mg/m3	

8.2. Exposure controls

Engineering measures: Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

Respiratory equipment: In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or national legislation.

Hand protection: For prolonged or repeated skin contact use suitable protective gloves. PVC or rubber gloves are recommended.

Eye protection: Use eye protection. Goggles/face shield are recommended. Contact lenses should not be worn when working with this product.

Hygiene measures: When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

Skin Protection: Use the appropriate skin cream to prevent drying skin. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

SECTION 9: Physical and chemical; properties.

Physical state	Moist Powder.
Colour	White.
Odour	odourless.
Odour threshold	Not applicable
pH	13 (Diluted)



www.keramikos.nl

BONE ASH

Safety Data Sheet

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Solubility

Insoluble in water

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity.

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions

Not relevant.

10.4. Conditions to avoid

Not relevant

10.5. Incompatible materials

No specific, or groups of materials, are likely to react to produce a hazardous situation.

10.6. Hazardous decomposition products

Not relevant

SECTION 11: Toxicological information.

11.1. Information on toxicological effects

General information: This product has low toxicity. Only large volumes may have adverse impact on human health.

Inhalation: Dust in high concentrations may irritate the respiratory system.



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BONE ASH

Safety Data Sheet

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Ingestion: No harmful effects expected in amounts likely to be ingested by accident.

Skin contact: Prolonged contact may cause dryness of the skin. Eye contact Particles in the eyes may cause irritation and smarting

SECTION 12: Ecological information.

12.1. Acute fish toxicity

Not relevant

12.2. Persistence and degradability

This product is not readily biodegradable.

12.3. Bioaccumulative potential

The product is not bioaccumulating.

12.4. Mobility in soil

Not relevant, due to the form of the product.

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT or vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects None known.

SECTION 13: Disposal considerations.



www.keramikos.nl

BONE ASH

Safety Data Sheet

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13.1. Waste treatment methods

Waste treatment methods: Dispose of this material and residues in accordance with local authority requirements.

Additional information: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

SECTION 14: Transport information.

14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Not classified for transportation.

14.3. Transport hazard class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product.

14.6. Special precautions for user

Not classified for transportation.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information.



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Safety Data Sheet

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

National regulatory information: Health and Safety at Work etc. Act 1974 (as amended). The Chemicals

(Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716)

International legislation/requirements: Dangerous Substances Directive 67/548/EEC. Dangerous

Preparations Directive 1999/45/EC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and

Restriction of Chemicals (REACH) (as amended).

EU Legislation:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment.

Not classified as dangerous to supply. The dry product can be regarded as an alkaline irritant.

SECTION 16: Other information.

Hazard statements in full

H302 Harmful if swallowed

H315 Causes skin irritation H319

Causes serious eye irritation

H335 May cause respiratory irritation.

Abbreviations and acronyms:



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ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways

ADR: European Agreement concerning international carriage of Dangerous goods by Road

AF: Assessment factor

BCF: Bioconcentration factor Bw:
Body weight

CAS: Chemical Abstracts Service

CLP: Classification, labelling, packaging

CSR: Chemical Safety Report

DMEL: Derived maximum effect level

DNEL: Derivative No effect Level

EC: European Community

ELV: Emission limit values

EN: European Norm

EUH: European Hazard Statement EWC:

European Waste catalogue IATA:

International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

LC50: Median lethal concentration

LD50: Median lethal dose

NOAEL: No-observed-adverse-effect-level



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NOEC: No observed effect concentration

NOEL: No observed effect level

OEL: Operator exposure level

PBT: Persistent, bioaccumulative, Toxic

PEC: Predicted effect level

PNEC: Predicted No effect Concentration

REACH: Registration, evaluation and autorisation of chemicals

RID: Regulations concerning the international carriage of dangerous goods by rail

STEL: Short Term Exposure Limit TWA: Time

weighted average vPvB: Very persistent, very

bioaccumulative.



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