



Health	1
Fire	0
Reactivity	0
Personal Protection	

## Material Safety Data Sheet

### Hydroxyapatite

#### 1: Chemical Product and Company Identification

<p><b>Product Name :</b> Hydroxyapatite</p> <p><b>Catalog Code :</b> 40800054</p> <p><b>CAS# :</b> 12167-74-7</p> <p><b>RTECS# :</b> Not available.</p> <p><b>TSCA :</b> TSCA 8(b) inventory: Arabic gum;</p> <p><b>CI# :</b> Not available.</p> <p><b>Chemical Name :</b> Hydroxyapatite</p> <p><b>Chemical Formula :</b> [Ca<sub>5</sub>(OH)(PO<sub>4</sub>)<sub>3</sub>]<sub>x</sub></p> <p><b>Synonym :</b> HAp; Calcium Phosphate Tribasic; Calcium phosphate; Hydroxylapatite; Calcium hydroxyphosphate;</p>	<p><b>Contact Information :</b></p> <p><b>bioWORLD</b> 4150 Tuller Road Suite 228 Dublin, OH 43017, USA</p> <p><b>Phone Number :</b> 614-792-8680</p> <p><b>Fax Number :</b> 614-792-8685</p> <p><b>Order Online :</b> <a href="http://www.bio-world.com/">http://www.bio-world.com/</a></p> <p><b>E-mail :</b> <a href="mailto:save@bio-world.com">save@bio-world.com</a></p> <p><b>In Case of a chemical emergency:</b> Contact local hospital</p> <p><b>For non-emergency assistance:</b> Call 1-800-860-9729</p>
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#### 2: Composition and Information on Ingredients

Name	CAS#	% of weight
Hydroxyapatite	12167-74-7	100%

**Toxicological Data :**  
LD50 Oral - rat - male and female - > 5.000 mg/kg  
LD50 Dermal - rabbit - male and female - > 2.000 mg/kg

#### 3: Hazards Identification

**Potential Acute Health Effects :** Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

**Potentials Chronic Health Effects :**

**Carcinogenic Effects :** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Mutagenic Effects :** mouse

Germ cell mutagenicity:

lymphocyte

Result: negative

Teratogenic Effects : Not available.

Developmental Toxicity : Not available.

#### 4: First Aid Measures

**Eye Contact** : In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Skin Contact** : In case of contact, immediately wash skin with soap and copious amounts of water. Call a physician if irritation persists.

**Serious Skin Contact** : Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation** : If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Serious Inhalation** : If breathed in, move person into fresh air. If not breathing give artificial respiration. Get medical attention.

**Ingestion** : Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician.

**Serious Ingestion** : If swallowed, wash out mouth with water provided person is conscious. Call a physician.

#### 5: Fire and Explosion Data

**Flammability of the Product** : Not available.

**Auto-Ignition Temperature** : Not available.

**Flash Points** : Not available.

**Flammable Limits** : Not available.

**Product of Combustion** : Oxides of phosphorus, Calcium oxide

**Fire Hazards in Presence of Various Substances** : Not available.

**Explosion Hazards in Presence of Various Substances** : Not available.

##### Fire Fighting Media and Instructions :

SMALL FIRE : Dry chemical powder.

LARGE FIRE : Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

**Special Remarks on Fire Hazards** : Not available.

**Special Remarks on Explosion Hazards** : Not available.

#### 6 : Accidental Release Measures

**Small Spill** : Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**Large Spill** : Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

#### 7: Handling and Storage

**Precautions** : Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection

**Storage** : Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

#### 8: Exposure Controls/Personal Protection

**Engineering Controls** : Use mechanical exhaust or laboratory fumehood to avoid exposure.

**Personal Protection** : Respiratory : Government approved respirator.

Hand: Chemical resistant gloves.

Eye: Safety glasses.

**Personal Protection in Case of a Large Spill** : Splash goggles. Full suit. Boots. Dust respirator. Gloves.

**Exposure Limits** : Not available.

### 9: Physical and Chemical Properties

**Physical State and Appearance** : Powder

**Odor** : Not available.

**Taste** : Not available.

**Molecular Weight** : 502.31 g/mol

**Color** : White

**PH Value** : Not available.

**Boiling Point** : Not available.

**Melting Point** : 1.100 °C - lit.

**Critical Temperature** : Not available.

**Specific Gravity** : Not available.

**Vapour Pressure** : Not available.

**Vapor Density** : Not available.

**Volatility** : Not available.

**Odor Threshold**:Not available.

**Water/Oil Dist. Coeff** : Not available.

**Ionicity(in Water)** : Not available.

**Dispersion Properties** : Not available.

**Solubility** : Insoluble in water.

### 10: Stability and Reactivity Data

**Stability** : Stable under recommended storage conditions.

**Instability Temperature** : Not available.

**Conditions of Instability** : Not available.

**Incompatibility with various substances** : Strong oxidizing agents.

**Corrosivity** : Not available.

**Special Remarks on Reactivity** : Not available.

**Special Remarks on Corrosivity** : Not available.

**Polymerization** : Not available.

### 11: Toxicological Information

**Routes of Entry** : Skin contact. Eye contact. Ingestion. Inhalation.

**Toxicity to Animals** : Acute toxicity

LD50 Oral - rat - male and female - > 5.000 mg/kg

LD50 Dermal - rabbit - male and female - > 2.000 mg/kg

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - rabbit

Result: No eye irritation

**Chronic Effects on Humans** : Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

**Other Toxic Effects on Humans** : Germ cell mutagenicity:

mouse

lymphocyte

Result: negative

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as

probable, possible or confirmed human carcinogen by IARC.

**Special Remarks on Toxicity to Animals** : Not available.

**Special Remarks on Chronic Effects on Humans** : Gastrointestinal disturbance, Nausea, Headache, Vomiting;

**Special Remarks on other Toxic Effects on Humans** : Not available.

## 12: Ecological Information

**Ecotoxicity** : Not available.

**BOD5 and COD** : Not available.

**Product of Biodegradation** : Not available.

**Toxicity of the Products of Biodegradation** : Not available.

**Special Remarks on the Products of Biodegradation** : Not available.

## 13: Disposal Considerations

**Waste Disposal** : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## 14: Transport Information

**DOT Classification** :

Not a DOT controlled material.

**IATA Classification** :

Not an IATA controlled material.

**IMDG Classification** :

Not a IMDG controlled material.

**Identification** : Not available.

**Special Provisions for Transport** : Not available.

### 15: Other Regulatory Information

**Federal and State Regulations** : Not available.

**Other Regulations** : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

This substance is not classified as dangerous according to Directive 67/548/EEC.

**Other Classifications** : Not available.

**WHMIS(Canada)** : D2B-Toxic material causing other toxic effects.

**DSCL(EEC)** : Not available.

**HMIS(U.S.A)** :

**Health Hazard** : 1

**Fire Hazard** : 0

**Reactivity** : 0

**Personal Protection** : Not available.

**National Fire Protection Association (U.S.A)** :

**Health** : 1

**Flammability** : 0

**Reactivity** : 0

**Specific hazard** : Not available.

**Protective Equipment** : Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety goggles.

### 16: Other Information

**References** : Not available.

**Other Special Considerations** :

**Created** : Not available. **Last Updated** : 05-19-2014 4:00:00 PM

#### Disclaimer

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