


<a href="#">Hydroxyapatite Nanoparticle Dispersion</a>	<a href="#">Pricing &gt;</a>
<a href="#">Hydroxyapatite Nanoparticles / Nanopowder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Hydroxyapatite Sputtering Target</a>	<a href="#">Pricing &gt;</a>

Linear Formula	[Ca <sub>5</sub> (OH)(PO <sub>3</sub> ) <sub>3</sub> ] <sub>n</sub>
Pubchem CID	29282806
MDL Number	MFCD00010904
EC No.	235-330-6
IUPAC Name	pentacalcium; hydroxide; triphosphate
SMILES	[OH-].[O-]P(=O)([O-])[O-].[O-]P(=O)([O-])[O-].[O-]P(=O)([O-])[O-].[Ca+2].[Ca+2].[Ca+2].[Ca+2].[Ca+2]
Inchi Identifier	InChI=1S/5Ca.3H3O4P.H2O/c;;;;;3*1-5(2,3)4/h;;;;;3*(H3,1,2,3,4);1H2/q5+2;;;;/p-10
Inchi Key	XYJRXVWERLGGKC-UHFFFAOYSA-D

Signal Word	Warning
Hazard Statements	H315-H319-H335
Hazard Codes	Xi
Risk Codes	36/37/38
Safety Statements	26
RTECS Number	N/A
Transport Information	N/A
WGK Germany	3
GHS Pictograms	<b><a href="#">GHS07</a></b> <b><a href="#">Exclamation Point</a></b> 

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## SAFETY DATA SHEET

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #1306-06-5

**Relevant identified uses of the substance:**

Scientific research and development

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**SECTION 2. HAZARDS IDENTIFICATION**

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Hazards not otherwise classified

No data available.

GHS label elements

The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS07

Signal word

Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P362

Take off contaminated clothing.

P321

Specific treatment (see on this label).

P332+P313

If skin irritation occurs: Get medical advice/attention.

P337+P313

If eye irritation persists: Get medical advice/attention.

WHMIS classification

Not controlled

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 1

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment:

PBT:

N/A.

vPvB:  
N/A.

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical characterization: Mixtures  
Dangerous components:  
1306-06-5 Calcium phosphate tribasic  
(Hydroxyapatite)  
Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3,  
H335  
10.0%  
Additional information  
None known.  
Non-Hazardous Ingredients  
7732-18-5 Water  
90.0%

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
If inhaled:  
Supply fresh air. If not breathing, provide artificial  
respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse  
thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running  
water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and  
delayed  
No information available.  
Indication of any immediate medical attention and  
special treatment needed  
No information available.

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### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing media  
Product is not flammable. Use fire-fighting measures  
that suit the surrounding fire.  
Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Calcium oxide

Phosphorus oxides

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleanup:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Prevention of secondary hazards:

No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Keep container tightly sealed.

Ensure adequate ventilation.

Information about protection against explosions and fires:

The product is not flammable

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

Refrigerate

Information about storage in one common storage facility:

Protect from heat.

Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many

reactive organic and inorganic chemicals.  
Further information about storage conditions:  
Keep container tightly sealed.  
Refrigerate  
Specific end use(s)  
No information available.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.  
Control parameters  
Components with limit values that require monitoring at the workplace:  
The product does not contain any relevant quantities of materials with critical values that should be monitored at the workplace.  
Additional information:  
No data  
Exposure controls  
Personal protective equipment  
Follow typical general protective and industrial hygiene measures for handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Breathing equipment:  
Use suitable respirator when high concentrations are present.  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.  
Penetration time of glove material (in minutes)  
No data available.  
Eye protection:  
Safety glasses  
Body protection:  
Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:  
Form: Dispersion  
Odor: No data available.  
Odor threshold: No data available.  
pH: No data available.  
Melting point/range: No data available.  
Boiling point/range: No data available.  
Sublimation temperature / start: No data available.  
Flammability (solid, gas):  
No data available.  
Ignition temperature: No data available.  
Decomposition temperature: No data available.  
Auto igniting: Product is not selfigniting.  
Danger of explosion: No data available.  
Explosion limits:  
Lower: No data available.  
Upper: No data available.  
Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)  
Density: No data available.  
Relative density  
No data available.  
Vapor density  
No data available.  
Evaporation rate  
No data available.  
Solubility in Water (H<sub>2</sub>O): Not miscible or difficult to mix  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: No data available.  
Kinematic: No data available.  
Solvent content:  
Organic solvents:  
0.0 %  
Solids content:  
10.0 %  
Other information  
No information available.

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available.  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Water reacts violently with alkali metals.  
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many

reactive organic and inorganic chemicals.  
Conditions to avoid  
No information available.  
Incompatible materials:  
Heat  
Hazardous decomposition products:  
Calcium oxide  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

N/A

LD/LC<sub>50</sub> values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

N/A

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

N/A

Specific target organ system toxicity - repeated exposure:

N/A

Specific target organ system toxicity - single exposure:

N/A

Aspiration hazard:

N/A

Subacute to chronic toxicity:

N/A

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:

No information available.

Persistence and degradability:

No information available.  
Bioaccumulative potential:  
No information available.  
Mobility in soil:  
No information available.  
Additional ecological information:  
General notes:  
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment:  
PBT:  
N/A.  
vPvB:  
N/A.  
Other adverse effects  
No information available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation:  
Consult state, local or national regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, ADN, IMDG, IATA  
N/A  
UN proper shipping name  
DOT, ADN, IMDG, IATA  
N/A  
Transport hazard class(es)  
DOT, ADR, ADN, IMDG, IATA  
Class  
N/A  
Packing group  
DOT, IMDG, IATA  
N/A  
Environmental hazards:  
Marine pollutant (IMDG):  
No  
Special precautions for user  
N/A.  
Transport in bulk according to Annex II of



MARPOL73/78 and the IBC Code  
N/A.  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT):  
No

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements  
The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)  
Hazard pictograms  
GHS07  
Signal word  
Warning  
Hazard statements  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
Precautionary statements  
P280  
Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P362  
Take off contaminated clothing.  
P321  
Specific treatment (see on this label).  
P332+P313  
If skin irritation occurs: Get medical advice/attention.  
P337+P313  
If eye irritation persists: Get medical advice/attention.  
National regulations  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  
This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.  
SARA Section 313 (specific toxic chemical listings)  
None of the ingredients are listed.  
California Proposition 65

Prop 65 - Chemicals known to cause cancer  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, female  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, male  
None of the ingredients are listed.  
Information about limitation of use:  
For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
None of the ingredients are listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the market  
and use must be observed.  
None of the ingredients is listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
None of the ingredients is listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried  
out.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No.  
1907/2006 (REACH). The above information is  
believed to be correct but does not purport to be all  
inclusive and shall be used only as a guide. The  
information in this document is based on the present  
state of our knowledge and is applicable to the  
product with regard to appropriate safety precautions.  
It does not represent any guarantee of the properties  
of the product. American Elements shall not be held  
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