



# Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

Document Number: SDS 020.003  
Date Revised: 6/04/2019

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product Identifier:**

**Trade Name (as labeled):** Alpha-Dent® Zinc Phosphate Cement - Liquid  
**Product Form:** Mixture  
**Part/Item Number:** 305-0100-002

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:**

**Recommended Use:** Cement  
**Restrictions on Use:** For Professional Use Only

**1.3 Details of the Supplier of the Safety Data Sheet:**

**Manufacturer/Supplier Name:** Dental Technologies, Inc.  
**Manufacturer/Supplier Address:** 6901 N. Hamlin Avenue  
 Lincolnwood, IL 60712  
**Manufacturer/Supplier Telephone Number:** 800-835-0885 or 847-677-5500 (Product Information)  
**Email address:** [info@dentaltech.com](mailto:info@dentaltech.com)

**1.4 Emergency Telephone Number:**

**Emergency Contact Telephone Number:** Chemtrec  
 800-424-9300 (USA)  
 001-703-527-3887 (Outside USA)

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the Substance or Mixture:**

The product as manufactured is a liquid composed of chemical ingredients. No hazardous exposures are anticipated during normal product handling and use conditions.

GHS Classification:		
Health	Environmental	Physical
Skin Corrosion/irritation Category 1A (H314/315) Serious eye damage/irritation Category 1 (H318/319)	Aquatic Acute Toxicity Category 1 (H400) Aquatic Chronic Toxicity Category 1 (H410)	Not Hazardous

**2.2 Label Elements:**

Hazard pictograms (GHS-US)



GHS05    GHS07    GHS09

**Signal Word:** Danger, Warning

Hazard Phrases	Precautionary Phrases
H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects	P260 – Do not breathe dust/fume/gas/mist/vapors/spray. P264 – Wash hands thoroughly after handling. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse SKIN with water/shower. P363 – Wash contaminated clothing before reuse. P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 – Immediately call a POISON CENTER or doctor/physician. P321 – Specific treatment in section 4 of this document. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 – Store locked up. P501 – Dispose of contents/container in accordance with local and national regulations. P302+P352 – IF ON SKIN: wash with plenty of soap and water. P332+P313 – IF SKIN irritation occurs: Get medical advice/attention. P362 – Take off contaminated clothing and wash before use. P337+P313 – IF eye irritation persists: Get medical advice/attention. P273 – Avoid release to the environment. P391 – Collect spillage. Hazardous to the aquatic environment.

**2.3 Other Hazards:** None known.

**2.4 Unknown acute toxicity (GHS-US):** No data available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances:** Not applicable

**3.2 Mixture:**

Hazardous Components	C.A.S. #	Classification	WT %
Phosphoric Acid	7664-38-2	H314/315 Skin Corrosion/irritation Category 1A H318/319 Serious eye damage/irritation Category 1	50-75%
Water	7732-18-5	Not Classified	10-25%

Aluminum Hydroxide	21645-51-2	Not Classified	1-10%
Zinc Oxide	1314-13-2	H400 Aquatic Acute Toxicity Cat. 1 H410 Aquatic Chronic Toxicity Cat. 1	1-10%

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS Classifications.

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures:

<b>Eye</b>	Wash open eye with running water for 15 minutes. Seek immediate medical attention.
<b>Skin</b>	Immediately wash the affected skin with plenty of water and soap while removing contaminated clothing and shoes. Rinse thoroughly. Wash clothing before reuse.
<b>Inhalation</b>	Inhalation is not an expected hazard.
<b>Ingestion</b>	Do not induce vomiting. Drink plenty of water. Seek medical help immediately.

### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

<b>Eye</b>	Corrosive. May cause redness, pain, blurred vision, eye burns.
<b>Skin</b>	Corrosive. May cause redness, pain, skin burns.
<b>Inhalation</b>	Not an inhalation hazard under normal use.
<b>Ingestion</b>	Corrosive. May cause sore throat, abdominal pain, nausea, severe burns to mouth, throat, upper respiratory tract, and stomach.

### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

Immediate medical attention is required if ingested, exposed to skin or eyes.

**Note to Physicians (Treatment, Testing, and Monitoring):** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES





**5.1 Extinguishing Media:** Carbon dioxide and water spray

### 5.2 Special Hazards Arising from the Substance or Mixture:

Not determined.

### 5.3 Advice for Fire-Fighters:

<b>Fire Fighting Procedures:</b>	General: Evacuate all personnel; use protective equipment for fire-fighting.
<b>Precautions for Fire Fighters:</b>	Do not use water with strong full jet as it can move and spread the material. Firefighters should wear full emergency equipment and approved positive self-containing breathing apparatus.



Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Avoid contact with skin, eyes, or clothing. Wear appropriate clothing as described in Section 8.

#### Recommended Personal Protective Equipment for Containment and Clean-up:

EYES/FACE	HANDS	RESPIRATORY	SKIN
			

### 6.2 Environmental Precautions:

Prevent entry into sewers and waterways. Report releases as required by local, state, and national authorities. Avoid contact with skin, eyes or clothing. Wear appropriate clothing as described in Section 8.

### 6.3 Methods and Material for Containment and Cleaning up:

Absorb with liquid absorbent material such as sand, sawdust, acid binders, diatomite, etc. Neutralize acid before disposal as hazardous waste. Rinse spill area with water. Use non-sparking tools and equipment.

### 6.4 Reference to Other Sections:

Refer to Section 8 for Personal Protective Equipment and Section 13 for disposal information.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin, and clothing. Wear protective clothing and equipment as described in Section 8. Wash thoroughly after handling. Keep away from heat, sparks, flames, and other sources of ignition.

**7.2 Conditions for Safe Storage, Including Any Incompatibilities:**

Store in a cool, dry, well-ventilated area away from heat, direct sunlight, and all sources of ignition. Store away from incompatible materials. Keep container closed to prevent contamination.

**7.3 Specific End Use (s):** Cement



**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control Parameters:** No additional information available.

**8.2 Exposure Controls:**

**Appropriate Engineering Controls:** None required under normal product handling conditions.

**Individual Protection Measures (PPE)**  
**Specific Eye/face Protection:** Chemical safety goggles should be worn if needed to avoid eye contact.  
**Specific Skin Protection:** Wear impervious gloves such as natural rubber or neoprene if needed to avoid skin contact. Consult glove supplier for thickness and breakthrough times.  
**Specific Respiratory Protection:** None should be needed under normal use. If exposure limits are exceeded an approved respirator or appropriate, supplied respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.  
**Specific Thermal Hazards:** None required.

<b>Recommended Personal Protective Equipment</b>			
<b>EYES/FACE</b>	<b>HANDS</b>	<b>RESPIRATORY</b>	<b>SKIN</b>
			

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on Basic Physical and Chemical Properties:**

<b>Physical state:</b>	Liquid	<b>Relative density:</b>	1.5 - 1.8
<b>Appearance:</b>	Colorless	<b>Explosive limits:</b>	Not an explosion hazard
<b>Odor:</b>	Odorless	<b>Vapor pressure (mmHg):</b>	Not determined
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	Not determined
<b>pH:</b>	Not determined	<b>Solubility(ies):</b>	Fully miscible with water
<b>Melting/freezing point:</b>	Not determined	<b>Partition coefficient: n-octanol/water:</b>	Not determined

<b>Initial boiling point and boiling range:</b>	Not determined	<b>Auto-ignition temperature:</b>	Not determined
<b>Flash point:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Viscosity:</b>	Not determined
<b>Flammability (solid, gas):</b>	Not determined	<b>Oxidizing Properties:</b>	Not determined
<b>Explosive Properties:</b>	Not determined		

## 9.2 Other Information:

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity:** Stable at ambient temperature and under normal conditions of use.

**10.2 Chemical Stability:** Stable at standard temperature and pressure

**10.3 Possibility of Hazardous Reactions:** No dangerous reactions under normal conditions of use.

**10.4 Conditions to Avoid:** Keep away from heat, sparks, incompatible materials, flames, and other sources of ignition.

**10.5 Incompatible materials:** Strong caustics and metals.

**10.6 Hazardous Decomposition Products:** Fumes of phosphorous oxide.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

Acute toxicity: No data available

Germ cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:** Slightly toxic to the environment with potentially long lasting effects.

**12.2 Persistence and Degradability:** No data available.

**12.3 Bio-accumulative Potential:** No data available.

**12.4 Mobility in Soil:** No data available.

**12.5 Results of PBT and vPvB Assessment:** No data available.

**12.6 Other Adverse Effects:** No data available.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods:

**Regulations:** Dispose in accordance with all national and local regulations.

**Properties (Physical/Chemical) Affecting Disposal:** Acid.

**Waste Treatment Recommendations:** Do not allow undiluted product or large quantities to reach ground water, or sewage system. Dike and cover spilled liquid with dirt, vermiculite, or other inert absorbent. Cover spill with sodium bicarbonate and mix to neutralize. Neutralized waste must be disposed of in approved disposal facility. Dispose in accordance with national and local regulations.

## 14. TRANSPORT INFORMATION

### 14.1. UN number

UN 1760

### 14.2. UN proper shipping name

Corrosive liquids, N.O.S. (Phosphoric Acid Solution)

### 14.3. Transport hazard class(es)

8

### 14.4. Packing group

II

### 14.5. Environmental hazards

Slightly toxic to the environment

### 14.6. Special precautions for user

Not applicable

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

## 15. REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

Phosphoric Acid:

#### U.S. Federal Regulations

CERCLA Hazardous Substance List (40 CFR 302.4)	Listed
Superfund Amendments and Reauthorization Act of 1986 (SARA)	Immediate hazard
SARA 311/312 Hazardous Chemical	Yes
FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace	PHOSPHORIC ACID (CAS7664-38-2) High priority

#### U.S. State Regulations

US Massachusetts RTK – Substance List	PHOSPHORIC ACID (CAS 7664-38-2)
US New Jersey Worker and Community Right-to-Know Act	PHOSPHORIC ACID (CAS 7664-38-2)
US Pennsylvania Worker and Community Right-to-Know Law	PHOSPHORIC ACID (CAS 7664-38-2)
US Rhode Island RTK	PHOSPHORIC ACID (CAS 7664-38-2)

**15.2 Chemical Safety Assessment:** None required.

## 16. OTHER INFORMATION

HMIS Hazard Rating:

Health: 3	Flammability: 0	Reactivity: 0
-----------	-----------------	---------------

Full text of Classification abbreviations used in Section 2 and 3:

H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Supersedes: MSDS-020 Rev002

Date updated: 6/04/2019

Change Control Document #: DCN 6732

Revision Summary: June 4<sup>th</sup>, 2019 : Converted MSDS to Reach SDS. Updated all sections.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.

Manufacturer disclaimer:

FOR DENTAL USE ONLY. The information and recommendations are taken from sources (raw material MSDS(s), SDS(s) and manufacturers knowledge) believed to be accurate; however, the manufacturer makes no warranty with respect to the accuracy of the information or the suitability of the recommendation and assumes no liability to any user thereof. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.



# MATERIAL SAFETY DATA SHEET

---

---

**SECTION I - Product / Company Identification**

---

---

Product Trade Name: **ZINC PHOSPHATE CEMENT - POWDER**  
Part (Item) Number: 305-0201-001, 305-0301-001, 305-0401-001,305-0801-001  
Manufacturer: DENTAL TECHNOLOGIES, INC.  
Address: 6901 N. HAMLIN AVENUE  
City, State, Zip: LINCOLNWOOD, IL. 60712 U.S.A.  
Emergency Telephone Number: (800) 424-9300 / (703) 527-3887 (Chemtrec)  
Information Telephone Number: (800) 835-0885 / (847) 677-5500  
Date Revised: 11-Oct-2006 Rev. No. 002

---

---

**SECTION II - Hazardous Ingredients/Identity Information**

---

---

<b>Hazardous Components:</b>	<b>Concentration</b>	<b>CAS NO.</b>	<b>HAZ CODE</b>	<b>RISK CODE</b>
Zinc oxide		1314-13-2	N	R 50, R 53
Magnesium oxide		1309-48-4		

---

---

**SECTION III - Hazards Identification**

---

---

HAZARD CLASSIFICATION N Dangerous to the environment

---

---

**SECTION IV - First Aid Measures**

---

---

Skin: Not an irritant  
Ingestion: Induce vomiting. Seek medical attention  
Inhalation: Remove to fresh air. If breathing becomes difficult, contact a physician.  
Eyes: Flush with plenty of water. Seek immediate medical attention by an Ophthalmologist.

---

---

**SECTION V - Fire-fighting Measures.**

---

---

Suitable extinguishing media: NA  
Forbidden extinguishing media: None.  
Special firefighting measures: No special measures required

---

---

**SECTION VI - Accidental Release Measures**

---

---

Personal precautions: Follow some precautions of Section VII and personal protection in Section VIII  
Environmental precautions: Keep spilled material out of sewers.  
Reclaiming methods: Pick up spilled material mechanically

---

---

**SECTION VII - Handling and Storage**

---

---

Handling: No special measures required  
Storage: Room temperature.  
Incompatibilities: No further data  
Containers: Store in original containers.  
Other precautions: Use by trained professionals only and according to directions.

---

---

**SECTION VIII - Exposure Controls / Personal Protection**

---

---

General measures: Local exhaust or general ventilation that will reduce airborne dust to less than permissible exposure limits. Ventilation should not be directed to the work area to control airborne dust particulates. Local exhaust system is recommended over general ventilation system as it can control the emissions of the contaminants at its source, preventing dispersion into the general work area.

Exposure limits:		OSHA-PEL	ACGIH-TLV
Zinc Oxide	Total Dust	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Respirable dust	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Magnesium Oxide	Total Dust	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

General protective measures: Follow the usual precautionary measures for handling chemicals and good personal hygiene practice.

Respiratory protection: Normally none required. If handling material for extended periods of time with dust conditions, wear NIOSH/MSHA-approved type respirator.

Eye protection: Safety glasses or goggles.

Hands protection: Normally none required. If handling material for extended periods of time use of impervious gloves is recommended.

Skin protection: Light weight protective clothing

Other equipment: Lab coat over clothing recommended.

---

---

**SECTION IX - Physical and Chemical Properties**

---

---

Appearance:	Powder	Explosion limits:	Not an explosion hazard
Color	White to yellowish	Water solubility:	Insoluble
Odor	None	Evaporation rate:	Not determined
Boiling point:	Not determined	Density	Not determined
Flash point	Not applicable		

---

---

**SECTION X - Stability and Reactivity**

---

---

Stability:	Stable if stored as directed.
Conditions to avoid	None
Materials to avoid	None known
Hazardous decomposition products:	None
Hazardous polymerization products:	Will not occur

---

---

**SECTION XI - Toxicological Information**

---

---

Ingestion:	Inhalation of dust may be an irritant to pre-existing respiratory conditions.
Eye contact:	Like any fine particulate matter, may cause mechanical irritation to eyes.
Skin contact:	Like any fine particulate matter, may cause mechanical irritation to skin.
Inhalation:	Inhalation of dust may be an irritant to pre-existing respiratory conditions.
Prolonged exposure:	Not established.

---

---

**SECTION XII - Ecological Information**

---

---

Toxic to fish and other aquatic organisms  
Avoid releasing the product into environment, ground water and sewage system.

---

---

**SECTION XIII - Disposal Considerations**

---

---

Do not dispose together with household garbage. Do not allow product to reach sewage system.  
Dispose in accordance with Federal, State and local environmental regulations.

---

---

**SECTION XIV - Transport Information**

---

---

DOT Hazard Class: Not listed                      UN No.: No applicable information found

---

---

**SECTION XV - Regulatory Information**

---

---

CLASSIFICATION IN ACCORDANCE WITH EEC DIRECTIVES.

Hazard Classification Symbol:	N	Dangerous fo the environment
Risk statements	R 50	Toxic to aquatic organisms
	R 53	May cause long-term adverse effects in the aquatic environment
Safety Statements	S22	Do not breath dust

---

---

**SECTION XVI - Other Information**

---

---

	NFPA Hazard Classification:	HMIS Hazard Classification:
Health	0	0
Flammability	0	0
Reactivity	0	0
Specific Hazard / PPE	N/A	N/A

NFPA - National Fire Protection Association

N/A - Not Applicable

N/E - Not Established

**CAUTION: PRODUCT FOR PROFESSIONAL USE ONLY.**

The above information is based on presently available data and to our best knowledge for handling the product under normal conditions. Any use of this product in any way not indicated on this document or using it together with any other process/procedure will be exclusively under the user's responsibility.