



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

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:

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

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

| | |
|-------------------|--|
| Eye | Corrosive. May cause redness, pain, blurred vision, eye burns. |
| Skin | Corrosive. May cause redness, pain, skin burns. |
| Inhalation | Not an inhalation hazard under normal use. |
| Ingestion | 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:

| | |
|---------------------------------------|--|
| Fire Fighting Procedures: | General: Evacuate all personnel; use protective equipment for fire-fighting. |
| Precautions for Fire Fighters: | 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.

Recommended Personal Protective Equipment

| EYES/FACE | HANDS | RESPIRATORY | SKIN |
|---|---|-------------|------|
|  |  | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

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

| | | | |
|---|----------------|-----------------------------------|----------------|
| Initial boiling point and boiling range: | Not determined | Auto-ignition temperature: | Not determined |
| Flash point: | Not determined | Decomposition temperature: | Not determined |
| Evaporation rate: | Not determined | Viscosity: | Not determined |
| Flammability (solid, gas): | Not determined | Oxidizing Properties: | Not determined |
| Explosive Properties: | 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 4th, 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

| Hazardous Components: | Concentration | CAS NO. | HAZ CODE | RISK CODE |
|-----------------------|---------------|-----------|----------|------------|
| 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 ³ | 10 mg/m ³ |
| | Respirable dust | 5 mg/m ³ | 5 mg/m ³ |
| Magnesium Oxide | Total Dust | 15 mg/m ³ | 10 mg/m ³ |

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.