



Safety Data Sheet

Safety Data Sheet (in compliance with 29 CFR Part 1200 and 29 CFR Part 1020)

Document Number: SDS-054.004
Date Revised: 03/06/24

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

1.1 Product Identifier:

Trade Name (as labeled): Alginate Impression Material
Product Form: Mixture
Part/Item Number: 603-0100, 604-0100

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

Recommended Use: Impression Material
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 solid composed of encapsulated chemical ingredients. No hazardous exposures are anticipated during normal product handling and use conditions.

GHS Classification:		
Health	Environmental	Physical
Acute Oral Toxicity, Category 4, H302 Skin Irritant, Category 2, H315 Serious Eye Damage, Category 1, H318 Eye Irritation, Category 2, H319	Not Hazardous	Not Hazardous

Acute Inhalation Toxicity, Category 4, H332 Carcinogen, Category 1A, H350 Specific Target Organ Toxicity (Repeated Exposure), Category 1, H372		
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2.2 Label Elements:

Hazard pictograms (GHS-US)



GHS07



GHS08

Signal Word: Warning, Danger

Hazard Phrases	Precautionary Phrases
H302 – Harmful if swallowed H315 – Causes skin irritation H318 – Causes serious eye damage H319 – Causes serious eye irritation H332 – Harmful if inhaled H350 – May cause cancer H372 – Causes damage to organs through prolonged or repeated exposure	P201 – Obtain special instructions before use. P202 – Do not handle until all safety precautions have been read and understood. P260 – Do not breathe dust/fume/gas/mist/vapors/spray. P261 – Avoid breathing dust/fume/gas/mist/vapors/spray. P264 – Wash skin thoroughly after handling. P270 – Do not eat, drink or smoke when using this product. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P281 – Use personal protective equipment as required. P301+P312 – IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell. P302+P352 – IF ON SKIN: Gently wash with plenty of soap and water. P304+P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 – If exposed or concerned: Get medical advice/attention. P310 – Immediately call a POISON CENTER or doctor/physician. P312 – Call a POISON CENTER or doctor/physician if you feel unwell. P314 – Get medical advice/attention if you feel unwell. P321 – See section 4 for specific treatment. P330 – Rinse mouth. P332+P313 – If skin irritation occurs: Get medical advice/attention. P337+P313 – If eye irritation persists: Get medical advice/attention. P362 – Take off contaminated clothing and wash before reuse. P405 – Store locked up. P501 – Dispose on contents/containers in accordance with local and national regulations.

2.3 Other Hazards: None known.**2.4 Unknown acute toxicity (GHS-US):** No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: None.

3.2 Mixture:

Hazardous Components	C.A.S. #	Classification	WT %
Flux Calcined Diatomaceous Earth	68855-54-9	Carcinogen, Category 1, H350 Acute Inhalation Toxicity, Category 4, H332 Eye Irritation, Category 2, H319	50-75%
Microcrystalline Silica in the form of Quartz	14808-60-7	Carcinogen, Category 1A, H350 Specific Target Organ Toxicity (Repeated Exposure), Category 1, H372	1-10%
Zinc Oxide	1314-13-2	Acute Aquatic Toxicity, Category 1, H400 Chronic Aquatic Toxicity, Category 1, H410	1-10%
Dipotassium Hexafluorotitanate	16919-27-0	Acute Oral Toxicity, Category 4, H302 Serious Eye Damage, Category 1, H318	1-10%
Tetrasodium Pyrophosphate	7722-88-5	Acute Oral Toxicity, Category 4, H302 Serious Eye Damage, Category 1, H318	1-10%

The exact concentration is being withheld as a trade secret.

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

4. FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye	Immediately flush victim's eyes with large quantities of water for several minutes, holding the eyelids apart. Get medical attention if irritation persists.
Skin	Remove contaminated clothing. Wash skin with soap and water. If irritation develops, get medical attention. Launder clothing before re-use.
Inhalation	Remove victim to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration and get immediate medical attention.
Ingestion	Rinse out mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

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

May cause indigestion if ingested. May cause irritation, pain, eye burns, or eye damage if contacted with eyes. May cause irritation or rash for persons with preexistent skin sensitivity if contacted with skin. If inhaled, product is an acute respiratory irritant. Prolonged exposure: inhalation of crystalline silica is classified by the IARC as carcinogenic for humans and is also a known cause of silicosis, a non-cancerous lung disease. Long-term, unprotected exposure to dust levels above listed PEL or TLV may cause silicosis.

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

Immediate medical attention should not be required except in cases of eye contact, inhalation, or ingestion.

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: Use Chemical Foam, Carbon Dioxide, or Dry Chemical.

5.2 Special Hazards Arising from the Substance or Mixture:





Heat can initiate exothermic reaction.

5.3 Advice for Fire-Fighters:

Fire Fighting Procedures: Cool fire exposed containers with water spray. General: Evacuate all personnel; use protective equipment for fire-fighting.

Precautions for Fire Fighters: Firefighters should wear full emergency equipment and approved positive pressure 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:

Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Avoid contact with skin, eyes or clothing. Wear an approved respirator and work in a well-ventilated area. Wear appropriate protective 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. Avoid breathing vapors. Wear appropriate clothing as described in Section 8.

6.3 Methods and Material for Containment and Cleaning up:

Clean up with absorbent material and remove residue with alcohol damp wipe. 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. Avoid breathing vapors. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks, flames, and other sources on 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): No specific end use other than that mention in section 1.2.

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: Use NIOSH approved dust mask respirator under appropriate OSHA standards and regulations.

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:	Uniform Powder	Relative density:	No data available
Appearance:	White – Off-white	Explosive limits:	No data available
Odor:	Mint	Vapor pressure (mmHg):	No data available

Odor threshold:	No data available	Vapor density:	No data available
pH:	No data available	Solubility(ies):	Powder absorbs water
Melting/freezing point:	No data available	Partition coefficient: n-octanol/water:	No data available
Initial boiling point and boiling range:	No data available	Auto-ignition temperature:	No data available
Flash point:	No data available	Decomposition temperature:	No data available
Evaporation rate:	No data available	Viscosity:	No data available
Flammability (solid, gas):	No data available	Oxidizing Properties:	No data available
Explosive Properties:	No data available		

9.2 Other Information: None.

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: None known.
10.4 Conditions to Avoid: Temperatures over 27°C, direct sunlight or high intensity light. Keep away from heat, sparks, flames, and other sources of ignition.
10.5 Incompatible materials: Keep away from moisture, light, reducing agents, oxidizing agents, peroxides, amines, and open flames
10.6 Hazardous Decomposition Products: Carbon Oxides when burned.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Flux Calcined Diatomaceous Earth:

This product contains crystalline silica, which is considered a hazard by inhalation. IARC has classified crystalline silica as carcinogenic for humans (Group 1). Crystalline silica is listed by NTP as a known human carcinogen. Crystalline silica is also a known cause of silicosis, a noncancerous lung disease.

Calcium Sulfate Dihydrate:

Acute Oral toxicity – Rat – LD50	> 2,000 mg/kg
Irritation	Dust has shown to be an irritant to the respiratory tract and eyes.

Microcrystalline Silica:

Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have serious chronic health effects.

Signs and Symptoms of Exposure: Exposure to dust may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing, and shortness of breath. However, there may be no immediate signs or symptoms of exposure to hazardous concentrations of respirable crystalline silica. See repeated dose toxicity below for symptoms of silicosis. The absence of symptoms is not necessarily indicative of safe conditions.

Repeated dose toxicity:

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop mycobacterial infections (tuberculous and non-tuberculous) and fungal infections.

Inhalation of air with a very high concentration of respirable silica dust can cause the most serious forms of silicosis in a matter of months or a few years. Some epidemiologic studies have concluded that there is significant risk of developing silicosis even at airborne exposure levels that are equal to the recommended NIOSH REL and ACGIH TLV.

Other data with possible relevance to human health:

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin, and other internal organs) rheumatoid arthritis, systemic lupus, erythematosis, sarcoidosis, chronic bronchitis, chronic obstructive pulmonary disease, emphysema, chronic kidney disease, and end-stage renal disease.

Carcinogenicity: The International Agency for Research on Cancer has determined that crystalline silica is carcinogenic to humans (Group 1 – carcinogenic to humans). Refer to IARC Monograph 100C. A review of Human Carcinogens: Arsenic, Fibres, and Dusts (published in 2011) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as “known to be a human carcinogen”. Refer to the Twelfth Report on Carcinogens (2011). The American Conference of Governmental Industrial Hygienists classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Calcium Sulfate Hemihydrate:

Oral Toxicity – Rat – LD50	> 5,000 mg/kg
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Tetrasodium Pyrophosphate Anhydrous:

Oral Toxicity – Rat – LD50	3,770 mg/kg
Dermal toxicity – Rabbit – LD50	> 7,940 mg/kg
Eye irritation – rabbit	Corrosive

Potassium Titanium Fluoride:

Oral toxicity – rat – 327.27 mg/kg	
Comments	May cause irreversible eye damage

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Microcrystalline Silica:

Carp – LC50 – 72hr: > 10,000 mg/L

Zinc Oxide:

It is very toxic to aquatic organisms. Since it takes a very long time for zinc oxide to break down, it may cause adverse long-term effects in the aquatic environment.

Tetrasodium Pyrophosphate Anhydrous:

Daphnia Magna – EC50 – 48hr: 391 mg/L

Mosquito fish – LC50 – 96hr: 1,380 mg/L

High-eyes Medaka – LC50 – 48hr: 700 mg/L

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 of in accordance with local and national regulations.

Properties (Physical/Chemical) Affecting Disposal: None known.

Waste Treatment Recommendations: Incinerate or dispose according to local and national regulations.

14. TRANSPORT INFORMATION

14.1. UN number

N/A

14.2. UN proper shipping name

N/A

14.3. Transport hazard class(es)

N/A

14.4. Packing group

N/A

14.5. Environmental hazards

No data available

14.6. Special precautions for user

No data available

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

No data available

15. REGULATORY INFORMATION

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

U.S. Federal Regulations

Flux Calcined Diatomaceous Earth

OSHA Hazard Communications Standard, 29CFR 1910.1200	Materials is considered hazardous
RCRA	This material is not defined as hazardous waste per 40 CFR 261.
TSCA	This material is listed in the TSCA inventory, and is not otherwise regulated by TSCA sec 4,5,6,7, or 12.
CERCLA	Material is not reportable under CERCLA, local requirements may vary.
SARA	311/312 hazard categories – immediate and delayed health
Canada	This product is listed on the DSL
California Proposition 65	This product contains chemicals known to the state of California to cause cancer

Microcrystalline Silica in the form of Quartz:

SARA 311/312 Hazard Categories	Chronic Health Hazard
California Proposition 65	This product contains silica (respirable) which is known to the State of California to cause cancer
TSCA	Listed or exempt
DSL	Listed or exempt
Canadian WHMIS Classification	Class D, Division 2, Subdivision A (Very Toxic Material causing other Toxic Effects)
Japan METI	All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law
AICS	Listed or exempt
Australian National Occupational Health and Safety Commission Status	Hazardous, Harmful: Danger of serious damage to health by prolonged exposure by inhalation
ECL	Listed or exempt
PICCS	Listed or exempt
HSNO	Listed or exempt
REACH	Exempt

Zinc Oxide:

TSCA	Listed
CERCLA	Not Listed
SARA 302 Components	None
RCRA 261	TCLP Determination Pb, Cd
DOT 172	Not Regulated
FCC	Listed
SARA 311/312 Hazard Categories	Yes (Acute)
SARA 313 Compounds	Zn, Pb
U.S. EPA Reg. No.	71645-3
U.S. EPA PC Code	088502
U.S. TRI Reproductive Toxin	Yes
U.S. TRI Development Toxin	Yes
EINECS	Listed

Tetrasodium Pyrophosphate Anhydrous:

TSCA	Listed
DSL	Listed
EC	Listed
Japan	Listed
Australia	Listed
Korea	Listed
Philippines	Listed
China	Listed
SARA Hazard Notification	Immediate

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health: 2	Flammability: 0	Reactivity: 0
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Full text of Classification abbreviations used in Section 2 and 3:

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H400	Toxic to aquatic life
H410	Toxic to aquatic life with long lasting effects

Supersedes: January 4, 2022

Date updated: March 6, 2024

Change Control Document #: DCN 6943, 8386, 9320

Revision Summary: January 4, 2022: Removed references to flavors other than mint. March 6, 2024: Updated to revised GF-404 Rev001 Template.

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.