



**DENTAL
TECHNOLOGIES**

Safety Data Sheet

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

Document Number: SDS 012.006

Date Revised: 02/22/24

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

1.1 Product Identifier:

Trade Name (as labeled): Alpha-Dent® Light Cure Bonding Adhesive
Product Form: Mixture
Part/Item Number: 206-0100

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

Recommended Use: Adhesive
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
Acute Toxicity (Oral) 4, H302 Skin Irritation 3, H315 Skin Sensitization 1, H317 Eye Irritation 2B, H319 Specific Target Organ Toxicity (Single Exposure) 3, H335	Not hazardous	Not hazardous

2.2 Label Elements:

Hazard pictograms (GHS-US)



GHS07



GHS08

Signal Word: Warning

Hazard Phrases	Precautionary Phrases
H302 – Harmful if swallowed H315 – Causes skin irritation H317 – May cause an allergic skin reaction H319 – Causes serious eye irritation H335 – May cause respiratory irritation	P261 – Avoid breathing dust/fume/gas/mist/vapors/spray. P264 – Wash hands thoroughly after handling. P270 – Do not eat, drink or smoke when using this product. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302+P352 – IF ON SKIN: wash with plenty of soap and water. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 – See section 4 for specific treatment. P330 – Rinse mouth. P332+P313 – IF SKIN irritation occurs: Get medical advice/attention. P333+P313 – IF SKIN irritation or rash occurs: Get medical advice/attention. P337+P313 – IF eye irritation persists: Get medical advice/attention. P362 – Take off contaminated clothing and wash before reuse. P363 – Wash contaminated clothing before reuse. P405 – Store locked up. P501 – Dispose of contents/container 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 %
Diurethane Dimethacrylate	72869-86-4	Skin Sensitization, Category 1, H317 Acute Aquatic Toxicity, Category 3, H402 Chronic Aquatic Toxicity, Category 3, H412	25-50%
2-Propenoic acid, 2-methyl-,	1565-94-2	Skin Irritation, Category 3, H315	10-25%

(1-methylethylidene) bis [4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester		Eye Irritation, Category 2B, H319	
Tetrahydrofurfuryl methacrylate	2455-24-5	Flammable Liquid, Category 4, H226 Skin Sensitization, Category 1, H317 Eye Irritation, Category 2B, H319 Specific Target Organ Toxicity (Single Exposure): Respiratory System, Category 3, H335 Reproductive Toxicity, Category 2, H361	10-25%
2-Hydroxyethyl Methacrylate	868-77-9	Skin Sensitization, Category 1B, H317 Eye Irritation, Category 2B, H320 Acute Aquatic Toxicity, Category 3, H402	10-25%
1-6 Hexanediol dimethacrylate	6606-59-3	Skin Irritation, Category 2, H315 Eye Irritation, Category 2B, H319 Specific Target Organ Toxicity (Single Exposure): Respiratory Tract, Category 3, H335	1-10%
Mono HEMA Phthalate	27697-00-3	Skin Irritant, Category 2, H315 Serious Eye Damage, Category 1, H318 Specific Target Organ Toxicity (Single Exposure): Respiratory Tract, Category 3, H335	1-10%
Bisphenol "A" dimethacrylate	3253-39-2	Skin Irritant, Category 2, H315 Eye Irritant, Category 2A, H319 Specific Target Organ Toxicity (Single Exposure): Respiratory Tract, Category 3, H335	1-10%
2-(Dimethylamino) ethyl Methacrylate	2867-47-2	Flammable Liquids, Category 4, H227 Acute toxicity (Oral), Category 4, H302 Acute toxicity (Dermal), Category 4, H312 Skin corrosion, Category 1B, H314 Serious eye damage, Category 1, H318 Skin sensitization, Category 1, H317 Reproductive Toxicity, Category 2, H361 Acute Aquatic Toxicity, Category 3, H402	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:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

No data available.

Note to Physicians (Treatment, Testing, and Monitoring): May cause sensitization of susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: Chemical foam, Carbon Dioxide, or dry chemical.

5.2 Special Hazards Arising from the Substance or Mixture:





Heat can initiate exothermic polymerization.

5.3 Advice for Fire-Fighters:

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

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 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 further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

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:

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Wash thoroughly after handling. Provide appropriate ventilation. For precautions see section 2.2.

7.2 Conditions for Safe Storage, Including Any Incompatibilities:

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific End Use (s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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: Where risk assessment shows air purifying respirators are appropriate use a full face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protections, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government regulations.

Specific Thermal Hazards: Highly flammable. Keep away from sources of ignition.

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:	Homogeneous Liquid	Relative density:	No data available
Appearance:	Colorless – Pale Yellow	Explosive limits:	No data available
Odor:	No data available	Vapor pressure (mmHg):	No data available
Odor threshold:	No data available	Vapor density:	No data available
pH:	No data available	Solubility(ies):	No data available
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: Sunlight, sources of ignition or contamination.
10.5 Incompatible materials: Peroxides, Amines, Oxidizing or Reducing Agents.
10.6 Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes:

a. Acute Toxicity	Data either not available or does not fill the criteria for classification
b. Skin corrosion/irritation	Data available to make classification
c. Serious eye damage/ irritation	Data available to make classification
d. Respiratory or skin sensitization	Data available to make classification
e. Germ cell mutagenicity	Data either not available or does not fill the criteria for classification
f. Carcinogenicity	Data either not available or does not fill the criteria for classification
g. Reproductive toxicity	Data either not available or does not fill the criteria for classification
h. STOT-single exposure	Data available to make classification
i. STOT-repeated exposure	Data either not available or does not fill the criteria for classification
j. Aspiration hazard	Data either not available or does not fill the criteria for classification

Diurethane Dimethacrylate

Acute Oral Toxicity LD50 – Rat	> 2,000 mg/kg
Caustic burning/irritation of skin – rabbit – 4h	Not irritating
Serious eye damage/eye irritation – rabbit	Not irritating
Respiratory/skin sensitization	Sensitizing

Tetrahydrofurfuryl methacrylate:

Acute Toxicity:	
Oral (Estimate) – LD50	4003 mg/kg

2-Hydroxyethyl Methacrylate:

Acute Toxicity:	
Oral – LD50 – Rat	> 5,000 mg/kg
Dermal – LD50 – Rat	> 5,000 mg/kg
Respiratory/skin sensitization – guinea pig	Sensitizing; cases of sensitization also observed in humans

Mono Hema Phthalate:

Acute Toxicity	
Oral – Rat – LD50	> 2,000 mg/kg
Dermal – rabbit – LD50	> 10,000 mg/kg
Inhalation – rat – LC50 – 4h	12.2 mg/L

2-(Dimethylamino) ethyl methacrylate:

Acute Toxicity:	
LD50 – Oral – Rat	1,751 mg/kg
Skin corrosion/irritation – Rabbit – 24h	Causes burns
Serious eye damage/irritation – Rabbit – 2h	Corrosive
Respiratory or skin sensitization – guinea pig	May cause sensitization by skin contact

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Diurethane Dimethacrylate:

Acute aquatic toxicity category 3 (UN-GHS)

Chronic aquatic toxicity category 3 (UN-GHS)

LC50 Brachydanio rerio – 96h > 100 mg/L

Tetrahydrofurfuryl methacrylate:

Fathead Minnow – LC50 – 96h: 34.7 mg/L

2-Hydroxyethyl Methacrylate:

LC50 Oryzias latipes, OECD 203, semi-static, 96h: > 100 mg/L

NOEC Daphnia magna, OECD 202 part 2, flow through, 21d: 24.1 mg/L

EC50 Daphnia magna, OECD 202 part 1, static test, 48h: 380 mg/L

EC50 selenastrum capricornutum, OECD 201, 72h: 836 mg/L

NOEC selenastrum capricornutum, OECD 201, 72h: 400 mg/L

EC50 Pseudomonas fluorescens, DEV L8, 16h: > 3,000 mg/L

Mono Hema Phthalate:

Gambusia affinis – LC50 – 96h: 180 mg/L

Scenedesmus quadricauda – EC50 – growth inhibition: 10 mg/L

2-(Dimethylamino) ethyl methacrylate:

LC50 – Oryzias latipes – 96h: 19.1 mg/L

Immobilization EC50 – Daphnia magna – 48h: 33 mg/L

Growth inhibition EC50 – Scenedesmus capricornutum – 72h: 69.7 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 Endocrine disrupting properties: No data available

12.7 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: None known.

Waste Treatment Recommendations: Dispose in accordance with national and local 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. Maritime 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**

Diurethane Dimethacrylate:

REACH	Pre-registered
TSCA	Listed or exempted
DSL	Not listed
AICS	Listed or exempted
ECL	Listed or exempted
IECSC	Listed or exempted
HSNO	Listed or exempted
SARA 302 Components	None
SARA 313 Components	None
SARA 311/312 Hazards	None
Pennsylvania Right to Know Components	Diurethane Dimethacrylate (Cas No. 72869-86-4)

2-Propenoic acid, 2-methyl-, (1-methylethylidene) bis [4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester

TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
SARA 311/312 Hazard Categories	Acute Health Hazard

Tetrahydrofurfuryl methacrylate:

TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
SARA 311/312 Hazard Categories	Acute health hazard, chronic health hazard, fire hazard, reactive hazard
California Proposition 65	This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. (Benzene, methyl- CAS 108-88-3)
Pennsylvania State Right to Know Regulations	Tetrahydrofurfuryl Methacrylate CAS 2455-24-5

2-Hydroxyethyl Methacrylate:

REACH	Registered
TSCA	Listed or exempted
DSL	Listed or exempted
AICS	Listed or exempted
METI	Listed or exempted
ECL	Listed or exempted
PICCS	Listed or exempted
IECSC	Listed or exempted
HSNO	Listed or exempted
ECS	Listed or exempted
SARA 302 Components	None
SARA 311/312 Hazards	Acute Health Hazard

1,6-Hexanediol Dimethacrylate:

TSCA	Listed
DSL	Not Listed
NDSL	Listed
EINECS	Listed
SARA 311/312 Hazard Categories	Acute health hazard, reactive hazard

Mono Hema Phthalate:

TSCA	Listed
------	--------

Bisphenol A Dimethacrylate:

TSCA	Listed
DSL	Listed

2-(Dimethylamino) ethyl methacrylate:

SARA 302 Components	None
SARA 311/213 Hazards	Fire Hazard, Acute Health Hazard
Massachusetts State Right to Know Regulations	2-(Dimethylamino) ethyl methacrylate (CAS 2867-47-2)
Pennsylvania State Right to Know Regulations	2-(Dimethylamino) ethyl methacrylate (CAS 2867-47-2)
New Jersey State Right to Know Regulations	2-(Dimethylamino) ethyl methacrylate (CAS 2867-47-2)

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health: 2	Flammability: 1	Reactivity: 1
-----------	-----------------	---------------

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

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Supersedes: May 22, 2023

Date updated: February 22, 2024

Change Control Document #: DCN 8949, 9288

Revision Summary: May 22, 2023: Updated to Commission Regulation (EU) 2020/878. February 22, 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.