



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 011.004
Date Revised: 8/12/2019

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

1.1 Product Identifier:

Trade Name (as labeled): Alpha-Dent® Self Cure Bonding Adhesive
Product Form: Mixture
Part/Item Number: Base: 200-0100
Catalyst: 200-0200

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

Recommended Use: Bonding 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 encapsulated 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 Irritant 2 (H315) Skin Sensitizer 1B (H317) Eye Irritant 2B (H319) | Not hazardous | Not hazardous |

2.2 Label Elements:

Hazard pictograms (GHS-US)



GHS07



GHS08

Signal Word: Warning

| Hazard Phrases | Precautionary Phrases |
|--|---|
| <p>H302 – Harmful if swallowed H315 – Causes skin irritation. H317 – May cause an allergic skin reaction. H319 – Causes serious eye irritation.</p> | <p>P264 – Wash hands and skin 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+P312 – IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell. 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. P310 – Immediately call a POISON CENTER or doctor/physician. P312 – Call a POISON CENTER or doctor/physician if you feel unwell. 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. P362 – Take off contaminated clothing and wash before reuse. P363 – Wash contaminated clothing before reuse. P405 – Store locked up. P501 – Dispose of contents/containers in accordance with local and national regulations.</p> |

2.3 Other Hazards: None known.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Self Cure Bonding Adhesive Base:

3.1 Substances: None.

3.2 Mixture:

| Hazardous Components | C.A.S. # | Classification | WT % |
|---|------------|---|--------|
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) bis [4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | 1565-94-2 | Skin Irritant, Category 3, H315 Eye Irritant, Category 2B, H319 | 25-50% |
| Diurethane Dimethacrylate | 72869-86-4 | Skin Sensitization, Category 1A, H317 Acute Aquatic Hazard, Category 3, H402 Chronic aquatic hazard, category 3, H412 | 25-50% |

| | | | |
|-------------------------------------|-----------|--|--------|
| Tetrahydrofurfuryl methacrylate | 2455-24-5 | Flammable liquid, Category 4, H226 Skin Sensitization, Category 1, H317 Eye Irritant, 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, H137 Eye Irritant, Category 2B, H319 | 10-25% |
| 1,6-Hexanediol Dimethacrylate | 6606-59-3 | Skin Irritant, Category 2, H315 Eye Irritant, Category 2B, H319 Specific Target Organ Toxicity – Single Exposure, Respiratory Tract, Category 3, H335 | 1-10% |
| Bisphenol A Dimethacrylate | 3253-39-2 | Skin Corrosion, Category 2, H315 Serious Eye Damage, Category 2A, H319 Specific Target Organ Toxicity – Single Exposure, respiratory tract irritation, Category 3, H335 | 1-10% |
| N,N-Bis(2-Hydroxyethyl-)p-Toluidine | 3077-12-1 | Skin Irritant, Category 2, H315 Eye irritant, Category 2A, H319 Specific Target Organ Toxicity – Single Exposure, Respiratory Tract, Category 3, H335 Acute Toxicity, Oral, Category 4, H302 Combustible Dust | 1-10% |

The exact concentration is being withheld as a trade secret.

Self Cure Bonding Adhesive

Catalyst:

3.1 Substances: None.

3.2 Mixture:

| Hazardous Components | C.A.S. # | Classification | WT % |
|---|------------|---|--------|
| Triethylene Glycol Dimethacrylate | 109-16-0 | Skin Sensitization, Category 1, H317 | 25-50% |
| Diurethane Dimethacrylate | 72869-86-4 | Skin Sensitization, Category 1A, H317 Acute Aquatic Hazard, Category 3, H402 Chronic Aquatic Hazard, Category 3, H412 | 25-50% |
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene) bis [4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | 1565-94-2 | Skin Irritant, Category 3, H315 Eye Irritant, Category 2B, H319 | 25-50% |
| Mono Hema Phthalate | 27697-00-3 | Skin Irritant, Category 2, H315 Serious Eye Damage, Category 1, H318 Specific Target Organ Toxicity – Single Exposure, Category 3, H335 | 1-10% |
| Bisphenol A Dimethacrylate | 3253-39-2 | Skin Corrosion, Category 2, Serious Eye Damage, Category 2A, Specific Target Organ Toxicity – Single Exposure, respiratory tract irritation, Category 3, H335 | 1-10% |
| Benzoyl Peroxide | 94-36-0 | Organic Peroxide B, H241 Eye Irritant, Category 2A, H319 Skin Sensitization, Category 1, H317 | 1-10% |

| | | | |
|--|--|--|--|
| | | Acute Aquatic Toxicity, Category 1, H402 Chronic Aquatic Toxicity, Category 1, H412 | |
|--|--|--|--|

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. |
| Skin | Remove contaminated clothing. Wash skin with soap and water. If irritation develops, get medical attention. Launder clothing before re-use. Consult a physician. |
| 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 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:

Immediate medical attention should not be required except in cases of high quantities of ingestion or inhalation.

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: Use Chemical Foam, Carbon Dioxide, Dry Chemical Powder, Water Spray.





5.2 Special Hazards Arising from the Substance or Mixture:

Material may burn if exposed to flame.

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 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:

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



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 described 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) | | | |
| <p>Specific Eye/face Protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards.</p> <p>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.</p> <p>Specific Respiratory Protection: None should be needed under normal use. If exposure limits are exceeded an approved respirator or supplied air 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.</p> <p>Specific Thermal Hazards: None known.</p> | | | |
| Recommended Personal Protective Equipment | | | |
| EYES/FACE | HANDS | RESPIRATORY | SKIN |
|  |  | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties (Base/Catalyst):

| | | | |
|---|--|--|-------------------|
| Physical state: | Homogeneous Liquid/ Homogeneous Liquid | Relative density: | No data available |
| Appearance: | Colorless – Pale yellow/ Colorless – Light 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 under recommended storage conditions.

10.3 Possibility of Hazardous Reactions: None known.

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

10.5 Incompatible materials: Keep away from light, reducing agents, oxidizing agents, peroxides, amines and open flames.

10.6 Hazardous Decomposition Products: Oxides of Carbon when burned.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Triethylene Glycol Dimethacrylate:

| | |
|---------------------|---|
| Acute Toxicity: | |
| Oral – Mouse – LD50 | 10,750 mg/kg |
| Oral – Rat – LD50 | 10,837 mg/kg |
| Carcinogenicity: | Triethylene Glycol Dimethacrylate may contain trace quantities of substances known to the state of California to cause cancer and/or reproductive toxicity. |

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 |

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 |

Benzoyl Peroxide:

| | |
|---|--|
| Acute Toxicity | |
| Oral – Rat – LD50 | > 5,000 mg/kg |
| Inhalation – Rat – LD50 – 4h | 24.3 mg/L |
| Germ cell mutagenicity | Laboratory experiments have shown mutagenic effects. |
| Respiratory or skin sensitization - mouse | 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

Benzoyl Peroxide:
Oncorhynchus mykiss – semi-static test – LC50 – 96h: 0.0602 mg/L
Daphnia magna – immobilization – EC50 – 48h: 0.11 mg/L
Pseudokirchneriella subcapitata – growth inhibition – EC50 – 72h: 0.0711 mg/L
Activated sludge – respiration inhibition – EC50 – 30min: 35 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 in accordance with all national and local regulations.

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

Waste Treatment Recommendations: Unpolymerized (uncured) material may be hazardous waste. Incinerate uncured material and dispose in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

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:****U.S. Federal Regulations**

Triethylene Glycol Dimethacrylate:

| | |
|--------------------------------|---|
| OSHA | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) |
| TSCA | Listed |
| DSL/NDSL | Listed |
| EINECS | Listed |
| SARA Section 302 | There may be specific Threshold Planning Quantities for the components of this product. |
| SARA 311/312 Hazard Categories | Immediate (Acute) Health |
| SARA 313 Components | None |
| WHMIS Hazard Class | This product has been classified according to the hazard criteria of the CPR and MSDS contains all of the Information required by the CPR. None of the Components of this product are listed on the Priorities Substances List. |

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 |

Bisphenol A Dimethacrylate:

| | |
|------|--------|
| TSCA | Listed |
| DSL | Listed |

N,N-Bis(2-Hydroxyethyl)-p-Toluidine:

| | |
|--|---|
| TSCA | Listed |
| DSL | Listed |
| NDSL | Not Listed |
| EINECS | Listed |
| SARA 311/312 Hazard Categories | Acute health hazard, reactive hazard |
| Pennsylvania State Right to Know Regulations | N,N-Bis(2-Hydroxyethyl)-p-Toluidine CAS 3077-12-1 |
| New Jersey State Right to Know Regulations | N,N-Bis(2-Hydroxyethyl)-p-Toluidine CAS 3077-12-1 |

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 |

Mono Hema Phthalate:

| | |
|------|--------|
| TSCA | Listed |
|------|--------|

Benzoyl Peroxide:

| | |
|---|--|
| SARA Section 313 Components | Benzoyl Peroxide CAS 94-36-0 |
| SARA 311/312 Hazards | Reactivity hazard, acute health hazard |
| Massachusetts State Right to Know Regulations | Benzoyl Peroxide CAS 94-36-0 |
| Pennsylvania State Right to Know Regulations | Benzoyl Peroxide CAS 94-36-0 |
| New Jersey State Right to Know Regulations | Benzoyl Peroxide CAS 94-36-0 |

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

| | | |
|-----------|-----------------|---------------|
| Health: 1 | Flammability: 0 | Reactivity: 1 |
|-----------|-----------------|---------------|

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

| | |
|------|---|
| H226 | Flammable liquid and vapor |
| H302 | Harmful if swallowed |
| 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 |
| H402 | Harmful to aquatic life |
| H412 | Harmful to aquatic life with long lasting effects |

Supersedes: MSDS-011 Rev004

Date updated: 8/12/2019

Change Control Document #: 6909

Revision Summary: August 12th, 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.