



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-048.001
Date Revised: 8/27/2019

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

1.1 Product Identifier:

Trade Name (as labeled):	Dual Cure Core Build Up
Product Form:	Mixture
Part/Item Number:	Base: 122-0800, 122-0900
	Catalyst: 122-0700

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

Recommended Use:	Restorative
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 Irritation, Category 2, H315 Skin Sensitization, Category 1, H317 Eye Irritation, Category 2B, H319 Specific Target Organ Toxicity	Acute Aquatic Toxicity, Category 3, H402 Chronic Aquatic Toxicity, Category 3, H412	Not hazardous

(Single Exposure): Respiratory Tract, Category 3, H335		
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2.2 Label Elements:

Hazard pictograms (GHS-US)



GHS07

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 H402 – Harmful to aquatic life H412 – Harmful to aquatic life with long lasting effects	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. P271 – Use only outdoors or in a well-ventilated area. 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. 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. 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. P337+P313 – If eye irritation persists: Get medical advice/attention. P362 – Take off contaminated clothing before reuse. P363 – Wash contaminated clothing before reuse. P403+P233 – Store in a well-ventilated place. Keep container tightly closed. 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

Base:

3.1 Substances: None.

3.2 Mixture:

Hazardous Components	C.A.S. #	Classification	WT %
Diurethane Dimethacrylate	72869-86-4	Skin Sensitization, Category 1A, H317 Acute Aquatic Toxicity, Category 3,	10-25%

		H402 Chronic Aquatic Toxicity, Category 3, H412	
Ethoxylated Bisphenol A Dimethacrylate	41637-38-1	Skin Irritation, Category 2, H315 Skin Sensitization, Category 1, H317 Eye Irritation, Category 2B, H319 Specific Target Organ Toxicity (Single Exposure): Respiratory Tract, Category 3, H335	1-10%
Triethylene Glycol Dimethacrylate	109-16-0	Skin Sensitization, Category 1, H317	1-10%
Sodium Fluoride	7681-49-4	Acute Oral Toxicity, Category 3, H302 Skin Irritation, Category 2, H315 Serious eye Irritation, Category 2, H319 Specific Target Organ Toxicity (Single Exposure), Category 3, H335 Specific Target Organ Toxicity (Repeated Exposure), Category 1, H372	1-10%

The exact concentration is being withheld as a trade secret.

Catalyst:

3.1 Substances: None.

3.2 Mixture:

Hazardous Components	C.A.S. #	Classification	WT %
Crystalline Silica in the form of Quartz	14808-60-7	Carcinogen, Category 1A, H350 Specific Target Organ Toxicity (Repeated Exposure), Category 1, H372	50-75%
Diurethane dimethacrylate	72869-86-4	Skin Sensitization, Category 1A, H317 Acute Aquatic Toxicity, Category 3, H402 Chronic Aquatic Toxicity, Category 3, H412	10-25%
Triethylene Glycol Dimethacrylate	109-16-0	Skin Sensitization, Category 1, H317	1-10%
2-Propenoic acid, 2-methyl-, (1- methylethylidene) bis [4,1- phenyleneoxy(2-hydroxy-3,1- propanediyl)] ester	1565-94-2	Skin Irritation, Category 3, H315 Eye Irritation, Category 2B, H319	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:

Not expected to be a significant hazard under anticipated conditions of normal use. May cause eye and skin irritation. May cause skin sensitization. May be harmful if swallowed.

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, CO₂, Dry Chemical Powder, Water Spray. NOTE: Water may be ineffective in extinguishing the fire.

5.2 Special Hazards Arising from the Substance or Mixture:

None known.

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)

Specific Eye/face Protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection and approved under appropriate government standards.

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 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.

Specific Thermal Hazards: None known.

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 Paste/ Homogeneous Paste	Relative density:	No data available
Appearance:	Natural, Blue / White – Off- White	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:

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

Poly(oxy-1,2-ethanediyl),.alpha.,.alpha.'-[1-methylethylidene) di-4,1-phenylene] bis[.omega.-[(2-methyl - 1-oxo-2-propenyl)]-]:

Acute Toxicity:	
Oral – Rat – LD50	> 2,000 mg/kg
Dermal – Rat – LD50	> 2,000 mg/kg

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.

Sodium Fluoride

Acute Oral toxicity – Rat – LD50	52 mg/kg
Acute Dermal Toxicity – Rat – LD50	175 mg/kg

Aluminum Oxide:

Acute Toxicity:	
Oral – Rat – LD50	> 5,000 mg/kg

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

Poly(oxy-1,2-ethanediyl),.alpha.,.alpha.'-[1-methylethylidene) di-4,1-phenylene] bis[.omega.-[(2-methyl - 1-oxo-2-propenyl)]-]:

Fish – LD50 – 96h: > 100mg/L

Daphnia magna – EC50 – 48h: > 100 mg/L

Algae – EC50 – 72h: > 100 mg/L

Sodium Fluoride

Harmful to aquatic life with long lasting effects.

Oncorhynchus mykiss – LC50 static – 96h: 38-68 mg/L

Lepomis macrochirus – LC50 semi static – 96h: 830 mg/L

Pimephales promelas – LC50 semi static – 96h: 180 mg/L

Lepomis macrochirus – LC50 semi static – 96h: 530 mg/L

Pseudokirchneriella subcapitata – EC50 – 96h: 272 mg/L

Desmodesmus subspicatus – EC50 static – 72h: 850 mg/L

Daphnia magna – EC50 static – 48h: 98 mg/L

Daphnia magna – EC50 – 48h: 338 mg/L

Aluminum Oxide

LC50 Salmo trutta – 96h: > 100 mg/L

EC50 Daphnia magna – 96h: > 100 mg/L

EC50 Pseudokirchneriella subcapitata – 72h: > 100 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 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

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)

Poly(oxy-1,2-ethanediyl),.alpha.,.alpha.'-[1-methylethylidene] di-4,1-phenylene] bis[.omega.-[(2-methyl - 1-oxo-2-propenyl)]-:

TSCA	Listed
DSL	Listed

NDSL	Not Listed
EINECS	Listed
SARA 311/312 Hazard Categories	None
SARA 313 Components	None

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.

Sodium Fluoride:

TSCA	Complies
DSL	Complies
NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
SARA 311/312 Hazard Categories	Acute health hazard
Clean Water Act Hazardous Substance	Sodium Fluoride CAS 7681-49-4, reportable quantity 1000lb
Comprehensive Environmental Response Compensation and Liability Act	Sodium Fluoride CAS 7681-49-4, reportable quantity 1000lb
New Jersey State Right to Know Component	Sodium Fluoride CAS 7681-49-4
Massachusetts State Right to Know Component	Sodium Fluoride CAS 7681-49-4
Pennsylvania State Right to Know Component	Sodium Fluoride CAS 7681-49-4

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health: 2	Flammability: 1	Reactivity: 1
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Full text of Classification abbreviations used in Section 2 and 3:

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
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Supersedes: MSDS-048 Rev000

Date updated: 8/27/2019

Change Control Document #: DCN 6943

Revision Summary: August 27th, 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.