

SAFETY DATA SHEETS

This SDS packet was issued with item:

073202801

N/A

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard.
29 CFR 1900, 1200 Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As used on label and list)

Ti-Core Auto E (Base)

SECTION I

Manufacturer's Name

Essential Dental Systems, Inc.

Address (Number, Street, City, State, Zip)

89 Leuning Street

South Hackensack, NJ 07606

Emergency Telephone Number

Telephone Number for Information

(201) 487-9090

Date Prepared

March 1, 2009

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components

Other Limits

(Specific Chemical Identity) OSHA PEL ACHIH TIV Recommended %Optional

AROMATIC AND ALIPHATIC DIMETHACRYLATES

INORGANIC PIGMENTS

NN'-DIHYDROXYETHYL P-TOLUIDINE

SECTION III -Physical/Chemical Characteristics

Boiling Point

NE

Specific Gravity (H₂O = 1)

1.7

Vapor Pressure (mm Hg)

N/A

Melting Point

N/A

Vapor Density (AIR =1)

N/A

Evaporation Rate (Butyl Acetate = 1)

N/A

Solubility in Water

INSOLUBLE

Appearance and Odor

OFF WHITE PASTE WITH CHARACTERISTIC ACRYLATE ODOR

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used)

N/A

Flammable Limits

N/A

LEL

N/A

UEL

N/A

Extinguishing Media

DRY CHEMICAL FOAM, CO₂, DRY CHEMICAL

Special Fire Fighting Procedures

N/A

Unusual Fire and Explosion Hazards

MATERIAL MAY BURN IF EXPOSED TO FLAME.

SECTION V - Reactivity Data

Stability	Unstable	Conditions to Avoid HIGH TEMPERATURES
	Stable X	
Incompatability (Materials to Avoid) N/A		
Hazardous Decomposition or Byproducts N/A		
Hazardous Polymerization	May Occur X	Conditions to Avoid HIGH TEMPERATURE, STRONG OXIDIZERS AND PEROXIDES
	Will not Occur	

SECTION VI - Health Hazard Data

Routes of Entry:	Inhalation	Skin	Ingestion
	N/A	Yes	N/A

Health Hazards (Acute and Chronic)

None

Carcinogenicity: NTP IARC Monographs OSHA Regulated

NONE KNOWN

Signs and Symptoms of Exposure:

REPEATED CONTACT WITH SKIN MAY CAUSE REDDENING AND IRRITATION.

Medical Conditions Generally Aggravated by Exposure:

UNKNOWN

Emergency and First Aid Procedures:

EYES – FLUSH WITH COPIOUS AMOUNTS OF WATER. SKIN- WASH WITH SOAP AND WATER.

SECTION VII - Precautions for Safe Handling and Use:**Steps to Be Taken in Case Material is Released or Spilled:****Waste Disposal Method**

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL AUTHORITIES

Precautions to Be Taken in Handling and Storing:

STORE AT OR BELOW ROOM TEMPERATURE AVOID MOISTURE CONTACT IN UNPOLYMERIZED STATE

Other Precautions

NONE

SECTION VIII - Control Measures**Respiratory Protection (Specify Type)**

N/A

Ventilation:	Local Exhaust	Special
N/A	N/A	N/A
	Mechanical (General)	Other

Protective Gloves	Eye Protection
RECOMMENDED	RECOMMENDED

Other Protective Clothing or Equipment

N/A

Work/Hygienic Practices

GENERAL SAFE PRACTICES

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.

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Hazardous Components

Other Limits

(Specific Chemical Identity) OSHA PEL ACHIH TIV Recommended %Optional

AROMATIC AND ALIPHATIC DIMETHACRYLATE MONOMERS

BENZOYL PEROXIDE

2,6-DI-TER BUTYL-P-CRESOL (BHT)

SECTION III -Physical/Chemical Characteristics

Boiling Point

NE

Specific Gravity (H₂O = 1)

1.7

Vapor Pressure (mm Hg)

N/A

Melting Point

N/A

Vapor Density (AIR =1)

N/A

Evaporation Rate (Butyl Acetate = 1)

N/A

Solubility in Water

INSOLUBLE

Appearance and Odor

OFF WHITE PASTE WITH CHARACTERISTIC ACRYLATE ODOR

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used)

N/A

Flammable Limits

N/A

LEL

N/A

UEL

N/A

Extinguishing Media

DRY CHEMICAL FOAM, CO₂, DRY CHEMICAL

Special Fire Fighting Procedures

N/A

Unusual Fire and Explosion Hazards

MATERIAL MAY BURN IF EXPOSED TO FLAME.

SECTION V - Reactivity Data

Stability	Unstable	Conditions to Avoid HIGH TEMPERATURES
	Stable X	
Incompatability (Materials to Avoid) N/A		
Hazardous Decomposition or Byproducts N/A		
Hazardous Polymerization	May Occur X	Conditions to Avoid HIGH TEMPERATURE, STRONG OXIDIZERS AND PEROXIDES
	Will not Occur	

SECTION VI - Health Hazard Data

Routes of Entry:	Inhalation	Skin	Ingestion
	N/A	Yes	N/A

Health Hazards (Acute and Chronic)

None

Carcinogenicity: NTP IARC Monographs OSHA Regulated

NONE KNOWN

Signs and Symptoms of Exposure:

REPEATED CONTACT WITH SKIN MAY CAUSE REDDENING AND IRRITATION.

Medical Conditions Generally Aggravated by Exposure:

UNKNOWN

Emergency and First Aid Procedures:

EYES – FLUSH WITH COPIOUS AMOUNTS OF WATER. SKIN- WASH WITH SOAP AND WATER.

SECTION VII - Precautions for Safe Handling and Use:**Steps to Be Taken in Case Material is Released or Spilled:****Waste Disposal Method**

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL AUTHORITIES

Precautions to Be Taken in Handling and Storing:

STORE AT OR BELOW ROOM TEMPERATURE AVOID MOISTURE CONTACT IN UNPOLYMERIZED STATE

Other Precautions

NONE

SECTION VIII - Control Measures**Respiratory Protection (Specify Type)**

N/A

Ventilation:	Local Exhaust	Special
N/A	N/A	N/A
	Mechanical (General)	Other

Protective Gloves	Eye Protection
RECOMMENDED	RECOMMENDED

Other Protective Clothing or Equipment

N/A

Work/Hygienic Practices

GENERAL SAFE PRACTICES

The data given here is based on current knowledge and experience. The data does not signify any warranty with regard to the product's properties.



Dual Cure Composite Base Paste

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 07/01/2018

Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Dual Cure Composite Base Paste
Product code : 830-00, 832-00, 880-00

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Construction of dental composites. This product is part of a two-component system. For use with catalyst component.
Use of the substance/mixture : For professional use only

1.3. Details of the supplier of the safety data sheet

Essential Dental Systems
89 Leuning St, South Hackensack, NJ 07606
Tel: (201) 487-9090
Email: info@edsdental.com

1.4. Emergency telephone number

Emergency number : +1-201-487-9090 9:00 a.m. to 5:00 p.m. Eastern Standard Time

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317
Carc. 1A H350
STOT SE 3 H335

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : 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 (Inhalation)
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing vapours
P264 - Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, protective gloves
P302+P352 - If on skin: Wash with plenty of water
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P312 - Call a doctor, a POISON CENTER if you feel unwell
P321 - Specific treatment (see on this label)
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

Dual Cure Composite Base Paste

Safety Data Sheet

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P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester	(CAS No) 1565-94-2	5 - 25	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester	(CAS No) 6606-59-3	5 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Quartz	(CAS No) 14808-60-7	5 - 15	Acute Tox. 4 (Oral), H302 Carc. 1A, H350
Silica, amorphous, fumed, crystalline-free	(CAS No) 112945-52-5	5 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Triethylene glycol dimethacrylate	(CAS No) 109-16-0	1 - 10	Skin Sens. 1B, H317
2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester	(CAS No) 3253-39-2	<= 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Titanium dioxide	(CAS No) 13463-67-7	< 1	Carc. 2, H351
Ethanol, 2,2'-[(4-methylphenyl)imino]bis-	(CAS No) 3077-12-1	< 1	Eye Irrit. 2A, H319 Skin Sens. 1, H317
2,4-Dihydroxybenzophenone	(CAS No) 131-56-6	< 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
N,N-Dimethylaminoethyl methacrylate	(CAS No) 2867-47-2	< 1	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317

Titanium dioxide and Quartz used in this material does not have the potential to become of respirable size.
Normal application procedures poses no hazard since the material is bound and encapsulated.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Assure fresh air breathing. Seek immediate medical advice.
First-aid measures after skin contact	: Rinse and then wash skin thoroughly with water and soap. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub the skin and eyes after direct contact with the product. Get medical advice/attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Consult physician immediately. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May cause respiratory irritation. Inhalation of dust may cause irritation of the respiratory system. May cause cancer by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

Dual Cure Composite Base Paste

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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, SiO₂. Titanium dioxide. Metal oxides.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Avoid raising powdered materials into airborne dust. Minimize generation of dust. Store away from other materials. Ensure all national/local regulations are observed.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, mist or spray. Provide good ventilation in process area to prevent formation of vapour. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : A washing facility/water for eye and skin cleaning purposes should be present. Provide local exhaust or general room ventilation. Provide local exhaust to maintain dust levels below exposure limits.
- Storage conditions : Keep out of reach of children. Keep away from food and drink. Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Keep away from ignition sources (including static discharges). Keep the packing dry and well sealed to prevent contamination and absorption of humidity.
- Incompatible materials : Strong oxidizing agents. Strong acids, bases. Hydrogen fluoride.

7.3. Specific end use(s)

No additional information available

Dual Cure Composite Base Paste

Safety Data Sheet

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³

Silica, amorphous, fumed, crystalline-free (112945-52-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	80 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 ppm

Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : A washing facility/water for eye and skin cleaning purposes should be present. Use ventilation to keep exposure to airborne contaminants below the exposure limits. Provide local exhaust or general room ventilation to minimize exposure to dust.

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective goggles. Protective clothing. For certain operations, additional Personal Protection Equipment (PPE) may be required.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask. Wear appropriate breathing apparatus if air renewal not sufficient to maintain dust/vapour under TLV.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Paste.

Colour : Yellow

Odour : Not available

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : > 1 g/cm³ at 23 °C / 73 °F

Solubility : Water: insoluble

Log Pow : No data available

Log Kow : No data available

Dual Cure Composite Base Paste

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Hydrogen fluoride.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, SiO₂. Fume. Metal oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg
ATE US (oral)	500.00000000 mg/kg

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg

N,N-Dimethylaminoethyl methacrylate (2867-47-2)	
LD50 oral rat	1550 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
LC50 inhalation rat (mg/l)	620 mg/m ³ (Exposure time: 4 h)
ATE US (oral)	1550.00000000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)
Carcinogenicity : May cause cancer (Inhalation).

Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	2 - Known Human Carcinogens

Dual Cure Composite Base Paste

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Silica, amorphous, fumed, crystalline-free (112945-52-5)

IARC group	3 - Not classifiable
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Titanium dioxide (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified
(Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified
(Based on available data, the classification criteria are not met)

Symptoms/injuries after inhalation : May cause respiratory irritation. Inhalation of dust may cause irritation of the respiratory system.
May cause cancer by inhalation.

Symptoms/injuries after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Silica, amorphous, fumed, crystalline-free (112945-52-5)

LC50 fishes 1	> 10000 mg/l
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N,N-Dimethylaminoethyl methacrylate (2867-47-2)

EC50 Daphnia 1	53 mg/l (Exposure time: 48 h - Species: Daphnia magna)
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12.2. Persistence and degradability

Dual Cure Composite Base Paste

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Dual Cure Composite Base Paste

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with applicable local, national and international regulations.

Additional information : Do not re-use empty containers.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

Dual Cure Composite Base Paste

Safety Data Sheet

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ADR

Transport document description : No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Titanium dioxide (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC or 1999/45/EC

No additional information available

15.2.2. National regulations

No additional information available

15.3. US State regulations

U.S. State Regulations California Proposition 65: This product does not contain chemicals which qualify to the specifications set by California Proposition 65.

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1A	Carcinogenicity, Category 1A
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
Skin Sens. 1B	Sensitisation — Skin, category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H227	Combustible liquid
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
H351	Suspected of causing cancer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SDS US (GHS HazCom 2012)



Dual Cure Composite Catalyst Paste

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 07/01/2018

Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : Dual Cure Composite Catalyst Paste
Product code : 830-00, 832-00, 880-00

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Construction of dental composites. This product is part of a two-component system. For use with base component.
Use of the substance/mixture : For professional use only

1.3. Details of the supplier of the safety data sheet

Essential Dental Systems
89 Leuning St, South Hackensack, NJ 07606
Tel: (201) 487-9090
Email: info@edsdental.com

1.4. Emergency telephone number

Emergency number : +1-201-487-9090 9:00 a.m. to 5:00 p.m. Eastern Standard Time

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317
Carc. 1A H350

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



GHS07

GHS08

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H350 - May cause cancer (Inhalation)

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust, fume, mist, spray, vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of 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
P308+P313 - If exposed or concerned: Get medical advice/attention
P321 - Specific treatment (see on this label)
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
P362+P364 - Take off contaminated clothing and wash it before reuse

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P405 - Store locked up
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Quartz	(CAS No) 14808-60-7	5 - 55	Acute Tox. 4 (Oral), H302 Carc. 1A, H350
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester	(CAS No) 1565-94-2	5 - 35	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
Triethylene glycol dimethacrylate	(CAS No) 109-16-0	10 - 30	Skin Sens. 1B, H317
Silica, amorphous, fumed, crystalline-free	(CAS No) 112945-52-5	1 - 10	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
dibenzoyl peroxide, benzoyl peroxide	(CAS No) 94-36-0	< 1	Org. Perox. B, H241 Eye Irrit. 2A, H319 Skin Sens. 1, H317
2,6-Di-tert-butyl-4-methylphenol	(CAS No) 128-37-0	< 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312

Quartz used in this material does not have the potential to become of respirable size.
Normal application procedures poses no hazard since the material is bound and encapsulated.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Assure fresh air breathing. Seek immediate medical advice.
First-aid measures after skin contact	: Rinse and then wash skin thoroughly with water and soap. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Do not rub the skin and eyes after direct contact with the product. Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Inhalation of dust may cause irritation of the respiratory system. May cause cancer by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation. Frequent or prolonged contact with skin may cause dermal irritation. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, SiO₂. Titanium dioxide. Metal oxides.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Avoid raising powdered materials into airborne dust. Minimize generation of dust. Store away from other materials. Ensure all national/local regulations are observed.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, mist or spray. Provide good ventilation in process area to prevent formation of vapour. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : A washing facility/water for eye and skin cleaning purposes should be present. Provide local exhaust or general room ventilation. Provide local exhaust to maintain dust levels below exposure limits.
- Storage conditions : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Keep away from ignition sources (including static discharges). Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep out of reach of children. Keep away from food and drink.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³
Silica, amorphous, fumed, crystalline-free (112945-52-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	80 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 ppm

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dibenzoyl peroxide, benzoyl peroxide (94-36-0)		
USA ACGIH	ACGIH TWA (mg/m³)	5 fibers/cm³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

2,6-Di-tert-butyl-4-methylphenol (128-37-0)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA ACGIH	Remark (ACGIH)	(inhalable fraction, vapor)

8.2. Exposure controls

Appropriate engineering controls : A washing facility/water for eye and skin cleaning purposes should be present. Use ventilation to keep exposure to airborne contaminants below the exposure limits. Provide local exhaust or general room ventilation to minimize exposure to dust.

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective goggles. Protective clothing. For certain operations, additional Personal Protection Equipment (PPE) may be required.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask. Wear appropriate breathing apparatus if air renewal not sufficient to maintain dust/vapour under TLV.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Paste.

Colour : White

Odour : Not available

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : > 1 g/cm³ at 23 °C / 73 °F

Solubility : Water: insoluble

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, SiO₂. Fume. Metal oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Dual Cure Composite Catalyst Paste	
ATE US (oral)	500.00000000 mg/kg bodyweight

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg
ATE US (oral)	500.00000000 mg/kg

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
LD50 oral rat	890 mg/kg
LD50 dermal rat	2000 mg/kg
ATE US (oral)	890.00000000 mg/kg bodyweight
ATE US (dermal)	2000.00000000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)
Carcinogenicity : May cause cancer (Inhalation).

Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	2 - Known Human Carcinogens

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
IARC group	3 - Not classifiable

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
(Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure) : Not classified
(Based on available data, the classification criteria are not met)

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Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential Adverse human health effects and symptoms	: Harmful if swallowed.
Symptoms/injuries after inhalation	: Inhalation of dust may cause irritation of the respiratory system. May cause cancer by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation. Frequent or prolonged contact with skin may cause dermal irritation. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Silica, amorphous, fumed, crystalline-free (112945-52-5)

LC50 fishes 1	> 10000 mg/l
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2,6-Di-tert-butyl-4-methylphenol (128-37-0)

ErC50 (algae)	> 0.42 mg/l 72 hr
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12.2. Persistence and degradability

Dual Cure Composite Catalyst Paste

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Dual Cure Composite Catalyst Paste

Bioaccumulative potential	Not established.
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2,6-Di-tert-butyl-4-methylphenol (128-37-0)

BCF fish 1	230 - 2500
Log Pow	0.62

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with applicable local, national and international regulations.
Additional information	: Do not re-use empty containers.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information

Other information	: No supplementary information available.
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ADR

Transport document description	: No additional information available
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Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC or 1999/45/EC

No additional information available

15.2.2. National regulations

No additional information available

15.3. US State regulations

U.S. State Regulations California Proposition 65: This product does not contain chemicals which qualify to the specifications set by California Proposition 65.

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 1A	Carcinogenicity, Category 1A
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Org. Perox. B	Organic Peroxides, Type B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
Skin Sens. 1B	Sensitisation — Skin, category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H241	Heating may cause a fire or explosion
H302	Harmful if swallowed
H312	Harmful in contact with skin
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

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product