SAFETY DATA SHEETS

This SDS packet was issued with item:

070861211

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070619650 070841916

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

072343416

according to 29CFR1910/1200 and GHS Rev. 3

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S-Bond™

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: S-Bond™

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: 89105-00

Recommended uses of the product and restrictions on use: Primer for porcelain and ceramic restorations.

Manufacturer Details:

Danville Materials 3420 Fostoria Way Suite a200 San Ramon, CA 94583

Emergency telephone number:

Chemtrec 1-800-424-9300

SECTION 2: Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2 Eye irritation, category 2A



Flammable

Flammable liquids, category 2

Skin Irritation - Category 2. Eye Irritation - Category 2. Flammable Liquid - Category 2.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapor. Causes skin irritation.

Causes serious eye irritation.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.

Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

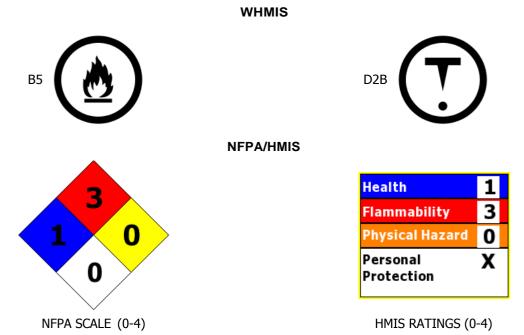
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S-Bond™

Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:



SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl alcohol	94 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors in high concentrations cause dizziness effects and sickness.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Ingestion can cause sickness and drunkenness. Seek medical attention if a substantial amount has been ingested. Large amounts of swallowed solution may cause unconsciousness.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath. Dizziness. Repeated exposure may cause skin dryness or cracking.

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S-Bond™

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Dry chemical powder, foam or carbon dioxide.

For safety reasons unsuitable extinguishing agents: None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

Reference to other sections:

None

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

The shelf life is 2 years. Store at room temperature (23°C; 74°F). Cap tightly to prevent loss of volatile components. Refrigerated storage will extend the shelf life. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame.

SECTION 8: Exposure controls/personal protection





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S-Bond™

Control Parameters: 64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.

64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).

64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m3 TWA.

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in

the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational

Exposure Limits-OELs) indicated above.

Respiratory protection: Not required under normal conditions of use. Where risk assessment

shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved

breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance. Select

glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear

protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under

appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and at the end

of work. Avoid contact with skin, eyes, and clothing. Before wearing wash

contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Colorless liquid	olorless liquid Explosion limit lower: Explosion limit upper:	
Odor:	Characteristical alcoholic	Vapor pressure:	60 mbar
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	3.0	Relative density:	Not Determined
Melting/Freezing point:	-114° C	Solubilities:	Soluble in water.
Boiling point/Boiling range:	78°C	Partition coefficient (noctanol/water):	Not Determined
Flash point (closed cup):	12° C	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Determined - Expected to evaporate quickly	Decomposition temperature:	Not Determined
Flammability (solid,gaseous):	Highly flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density: 0.8 g/cm3			

SECTION 10 : Stability and reactivity

according to 29CFR1910/1200 and GHS Rev. 3

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S-Bond™

Reactivity: Nonreactive under normal conditions. **Chemical stability:** Stable under normal conditions.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No

smoking. Heat in excess of 40°C, direct sunlight or intense light.

Incompatible materials: Strong acids, bases, and oxidizing agents. Peroxides, metal powders, free radical

initiators.

Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

SECTION 11 : Toxicological information

Acute Toxicity:			
Inhalation:	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)	
Oral:	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)	
Chronic Toxicity: N	lo additional information.		
Corrosion Irritation	: No additional information.		
Sensitization:		No additional information.	
Single Target Organ (STOT):		No additional information.	
Numerical Measures:		No additional information.	
Carcinogenicity:		No additional information.	
Mutagenicity:		No additional information.	
Reproductive Toxicity:		No additional information.	

SECTION 12: Ecological information

Ecotoxicity

64-17-5: 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L

[static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through]

64-17-5: 48 Hr LC50 Eisenia foetida: 0.1 - 1 mg/cm2 [filter paper]

Persistence and degradability: Not determined. Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste

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S-Bond™

regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1170

UN proper shipping name

Ethanol Mixture

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard: None

Transport in bulk:

Special precautions for user: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

according to 29CFR1910/1200 and GHS Rev. 3

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Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

None

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

Effective date: 06.01.2015 **Last updated**: 06.12.2015

ZEST DENTAL

SAFETY DATA SHEET

1. Identification

Product identifier Prelude One™

Other means of identification

Document number SDS-001-ZD Rev. A

Recommended use Adhesive. **Recommended restrictions** None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Danville Materials Company name

2875 Loker Avenue East **Address**

Carlsbad, CA 92010

1-800-827-7940 Telephone Contact **Customer Service**

E-mail danvillecs@zestdent.com

Website www.zestdent.com

Emergency telephone

number

800-451-8346 / 760-602-8703

2. Hazard(s) identification

Physical hazards Flammable liquids Category 3 **Health hazards** Skin corrosion/irritation Category 1B Serious eye damage/eye irritation Category 1

Sensitization, skin Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Flammable liquid and vapor. Causes severe skin burns and eye damage. May cause an allergic

skin reaction.

Precautionary statement

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly Prevention

closed. Ground/bond container and receiving equipment. Use explosion-proof

electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace. Wear protective

gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all Response

> contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. In case of fire: Use water fog, alcohol resistant foam, dry chemical powder, carbon

dioxide to extinguish.

Store in a well-ventilated place. Keep cool. Store locked up. Storage

Dispose of contents/container in accordance with local/regional/national/international regulations. **Disposal**

Hazard(s) not otherwise

classified (HNOC)

None known.

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3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Ethanol	64-17-5	25 - 45
Bisphenol A glycidyl methacrylate	1565-94-2	15 - 30
2-Hydroxyethyl methacrylate	868-77-9	5 - 25
Water	7732-18-5	2 - 10

Composition comments

The manufacturer has claimed one or more hazardous ingredients as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s) are given on this SDS.

All concentrations are in percent by weight.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

media

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and

delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. Causes digestive tract burns. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Special protective equipment

of ignition and flash back. During fire, gases hazardous to health may be formed.

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source

and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Specific methods

General fire hazards

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out.

Use standard firefighting procedures and consider the hazards of other involved materials.

Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering them. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Persons susceptible to allergic reactions should not handle this product. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Follow rules for flammable liquids. Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

US OSHA Table 7.4 Limits for Air Conteminants (20 CED 4040 4000)

Occupational exposure limits

US. OSHA Table Z-1 Limits for A Components	Туре	Value	
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3	
		1000 ppm	
US. OSHA Table Z-3 (29 CFR 191	0.1000)		
Components	Туре	Value	
Proprietary component	TWA	0.8 mg/m3	
		20 mppcf	
US. ACGIH Threshold Limit Valu	es		
Components	Туре	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
US. NIOSH: Pocket Guide to Che	emical Hazards		
Components	Туре	Value	
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3	
		1000 ppm	
Proprietary component	TWA	6 mg/m3	

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if

needed.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves.

Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Prelude One™ SDS US

Skin protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear NIOSH approved respirator

appropriate for airborne exposure at the point of use.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Clear liquid.
Color Light yellow.
Odor Not available.
Odor threshold Not available.

pH 2.8 (Approximately)

Melting point/freezing point Not available.

Initial boiling point and boiling Not available.

range

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Explosive properties Not explosive. **Oxidizing properties** Not oxidizing.

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials. Avoid heat, sparks, open flames and other ignition sources.

Protect against direct sunlight.

Strong oxidizing agents.

Incompatible materials

Hazardous decomposition

products

Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. Phosphorus oxides. Silicon oxide

fumes.

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11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns. May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. Causes digestive tract burns. May cause an allergic skin

reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components Species Test Results

2-Hydroxyethyl methacrylate (CAS 868-77-9)

<u>Acute</u>

Dermal

LD50 Rabbit > 3000 mg/kg

Oral

LD50 Rat > 4000 mg/kg

Ethanol (CAS 64-17-5)

Acute

Inhalation

Vapor

LC50 Mouse 39 g/m3, 4 Hours

Oral

LD50 Rat 7000 - 11000 mg/kg

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye Causes serious eye damage.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Proprietary component (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Prelude One™ SDS US

943645 Version #: 01 Revision date: - Issue date: 19-April-2018

Components Species Test Results

Ethanol (CAS 64-17-5)

Aquatic

Acute

Crustacea LC50 Ceriodaphnia dubia 5012 mg/l, 48 hours

Daphnia magna 454 mg/l, 11 days

Fish LC50 Pimephales promelas 13480 mg/l, 96 hours

Chronic

Crustacea NOEC Ceriodaphnia dubia 9.6 mg/l, 10 days

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-Hydroxyethyl methacrylate (CAS 868-77-9) 0.47 Ethanol (CAS 64-17-5) -0.31

Mobility in soil No data available for this product.

Other adverse effects The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic

organisms.

13. Disposal considerations

Disposal instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

DOT

UN number UN2920

UN proper shipping name Corrosive liquids, flammable, n.o.s. (Medronic acid; Ethanol)

Transport hazard class(es)

Class 8
Subsidiary risk 3
Label(s) 8, 3
Packing group II

Environmental hazards

Marine pollutant No

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions B2, IB2, T11, TP2, TP27

Packaging exceptions None
Packaging non bulk 202
Packaging bulk 243

IATA

943645

UN number UN2920

UN proper shipping name Corrosive liquid, flammable, n.o.s. (Medronic acid; Ethanol)

Transport hazard class(es)

Class 8
Subsidiary risk 3
Label(s) 8, 3
Packing group II
Environmental hazards No
ERG Code 8F

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Prelude One™ SDS US

Obtained by Global Safety Management, www.globalsafetynet.com, (877) 683-7460

IMDG

UN number UN2920

UN proper shipping name CORROSIVE LIQUID, FLAMMABLE, N.O.S. (MEDRONIC ACID; ETHANOL)

Transport hazard class(es)

Class 8
Subsidiary risk 3
Packing group II
Environmental hazards

Marine pollutant No EmS F-E, S-C

Ems F-E, S-C

Special precautions for user Read safety instructions, SDS and emergency procedures before handling. **Transport in bulk according to** Not established.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

Yes

Classified hazard

Flammable (gases, aerosols, liquids, or solids)

categories

Skin corrosion or irritation Serious eye damage or eye irritation

Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Ethanol (CAS 64-17-5) Low priority

US state regulations

US. Massachusetts RTK - Substance List

Ethanol (CAS 64-17-5)

Proprietary component (CAS Proprietary)

US. New Jersey Worker and Community Right-to-Know Act

Ethanol (CAS 64-17-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Ethanol (CAS 64-17-5)

Proprietary component (CAS Proprietary)

Prelude One™ SDS US

US. Rhode Island RTK

Ethanol (CAS 64-17-5)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

^{*}A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 19-April-2018

Revision date - 01

NFPA ratings



Disclaimer

Danville Materials cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Prelude One™ SDS US

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

ZEST DENTAL SOLUTIONS

SAFETY DATA SHEET

1. Identification

Product identifier Cem EZ™

Other means of identification

Document numberSDS-005-ZD Rev. DRecommended useDental materials.Recommended restrictionsNone known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company name Danville Materials

Address 2875 Loker Avenue East

Carlsbad, CA 92010

Telephone1-800-827-7940ContactCustomer Service

E-mail danvillecs@zestdent.com

Website www.zestdent.com

Emergency telephone 800-451-8346 / 760-602-8703

number

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Sensitization, skin Category 1

Environmental hazards Hazardous to the aquatic environment, acute Category 3

hazard

Hazardous to the aquatic environment, Category 3

long-term hazard

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Contaminated work clothing must not be allowed out of the workplace. Avoid release to the

environment. Wear protective gloves.

Response If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Cem EZ™ SDS US

939043 Version #: 06 Revision date: 03-December-2018 Issue date: 15-February-2018

Chemical name	CAS number	%
Ethoxylated bisphenol A dimethacrylate esters	41637-38-1	10 - 30
Triethylene glycol dimethacrylate	109-16-0	< 15
Bisphenol A gycidyl methacrylate	1565-94-2	< 10
Diurethane dimethacrylate	72869-86-4	< 10
Fluoride compound	Proprietary	Proprietary
Glass compound	Proprietary	Proprietary
Titanium compound	Proprietary	Proprietary

Composition comments

All concentrations are in percent by weight unless otherwise indicated. Components not listed are either non-hazardous or are below reportable limits.

The manufacturer has claimed one or more hazardous ingredients as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s) are given on this SDS.

4. First-aid measures

Move to fresh air. Call a physician if symptoms develop or persist. Inhalation

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of

> Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.

eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur. May cause an allergic skin reaction. Dermatitis. Rash. Most important

symptoms/effects, acute and delayed

Indication of immediate medical attention and special

treatment needed **General information** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Specific hazards arising from

the chemical

Special protective equipment and precautions for firefighters

Fire fighting equipment/instructions

Specific methods General fire hazards compounds. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Move containers from fire area if you can do so without risk. Cool containers exposed to flames

During fire, hazardous combustion products are released that may include: Carbon oxides. Nitrogen oxides. Phosphorus oxides. Fumes of metal oxides. Silicon oxide fumes. Fluorine

with water until well after the fire is out.

Use standard firefighting procedures and consider the hazards of other involved materials. Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Cem EZ™ SDS US

Methods and materials for containment and cleaning up

Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Provide adequate ventilation. When using, do not eat, drink or smoke. Avoid breathing mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Contact of resin-based composites with skin should be avoided, especially by anyone having known resin allergies. Avoid eugenol as it will inhibit set. Use only in dry field. Water and oily air will inhibit set and bond. Use a dispensing gun to avoid hand strain. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep away from food and drink. Keep refrigerated. Do not freeze. Do not store composite material in proximity of eugenol-containing products, nor let the composite come into contact with materials containing eugenol. Eugenol can impair the polymerization of the composite and cause discoloration. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Titanium compound PEL 15 mg/m3 Total dust. US. OSHA Table Z-2 (29 CFR 1910.1000) Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Dust. US. OSHA Table Z-3 (29 CFR 1910.1000) Components Type Value Form Titanium compound TWA 5 mg/m3 Respirable fraction 15 mg/m3 Total dust. 50 mppcf Total dust. 15 mppcf Respirable fraction	Components	Air Contaminants (29 CFR 1910.1 Type	Value	Form
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Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Dust. US. OSHA Table Z-3 (29 CFR 1910.1000) Type Value Form Titanium compound TWA 5 mg/m3 Respirable fraction 15 mg/m3 Total dust. 50 mppcf Total dust. 50 mppcf Total dust. 15 mppcf Respirable fraction US. ACGIH Threshold Limit Values Type Value Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Fiber. Glass compound TWA 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fibrous dust. 5 mg/m3 Fibrous dust.	Titanium compound	PEL	15 mg/m3	Total dust.
Fluoride compound US. OSHA Table Z-3 (29 CFR 1910.1000) Components Type Value Form Titanium compound TWA 5 mg/m3 Total dust. 50 mppcf Total dust. 15 mppcf Respirable fraction US. ACGIH Threshold Limit Values Components Type Value Fluoride compound TWA 2.5 mg/m3 Total dust. 15 mppcf Respirable fraction US. ACGIH Threshold Limit Values Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Fiber. Glass compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	US. OSHA Table Z-2 (29 CFR 19	910.1000)		
US. OSHA Table Z-3 (29 CFR 1910.1000) Components Type Value Form Titanium compound TWA 5 mg/m3 Respirable fraction 15 mg/m3 Total dust. 50 mppcf Total dust. 15 mppcf Respirable fraction US. ACGIH Threshold Limit Values Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Fiber. Fluoride compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	Components	Туре	Value	Form
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Titanium compound TWA 5 mg/m3 Fotal dust. 50 mppcf Total dust. 15 mppcf Respirable fraction 15 mppcf Total dust. 15 mppcf Respirable fraction WS. ACGIH Threshold Limit Values Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Fiber. 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	US. OSHA Table Z-3 (29 CFR 19	910.1000)		
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US. ACGIH Threshold Limit Values Components Type Value Fluoride compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 2.5 mg/m3 Fiber. 3 fibers/cm3 Fiber, total			15 mg/m3	Total dust.
Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Fluoride compound TWA 2.5 mg/m3 Fluoride compound TWA 2.5 mg/m3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total			50 mppcf	Total dust.
Components Type Value Fluoride compound TWA 2.5 mg/m3 Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Value Form Fluoride compound TWA 2.5 mg/m3 Glass compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total			15 mppcf	Respirable fraction
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Titanium compound TWA 10 mg/m3 US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form Fluoride compound TWA 2.5 mg/m3 Glass compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	Components	Туре	Value	
US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value Form 1.5 mg/m3 Fiber. 7 mg/m3 Fiber, total	Fluoride compound	TWA	2.5 mg/m3	
ComponentsTypeValueFormFluoride compoundTWA2.5 mg/m3Glass compoundTWA3 fibers/cm3Fiber.3 fibers/cm3Fibrous dust.5 mg/m3Fiber, total	Titanium compound	TWA	10 mg/m3	
Fluoride compound TWA 2.5 mg/m3 Glass compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	US. NIOSH: Pocket Guide to Cl	nemical Hazards		
Glass compound TWA 3 fibers/cm3 Fiber. 3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	Components	Туре	Value	Form
3 fibers/cm3 Fibrous dust. 5 mg/m3 Fiber, total	Fluoride compound	TWA	2.5 mg/m3	
5 mg/m3 Fiber, total	Glass compound	TWA	3 fibers/cm3	Fiber.
•			3 fibers/cm3	Fibrous dust.
5 mg/m3 fibers, total dust			5 mg/m3	Fiber, total
			5 mg/m3	fibers, total dust

Cem EZ™ SDS US

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Fluoride compound	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*

^{* -} For sampling details, please see the source document.

Appropriate engineering controls

General ventilation normally adequate. Ensure adequate ventilation, especially in confined areas.

Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove Hand protection

supplier.

Skin protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

None required where adequate ventilation conditions exist. In case of insufficient ventilation, wear Respiratory protection

suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants. Contaminated work clothing should not be allowed out of the

workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Viscous paste.

Color White to slightly brownish.

None. Odor

Odor threshold Not available.

Neutral. pН

Melting point/freezing point None known.

Initial boiling point and boiling

range

None known.

None known. Flash point **Evaporation rate** Not available. Not applicable. Flammability (solid, gas)

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available. Not available. Vapor pressure

Vapor density Not available. Relative density Not available.

Solubility(ies)

Not available. Solubility (water) Partition coefficient Not available.

(n-octanol/water)

Not available. **Auto-ignition temperature Decomposition temperature** Not available. None known.

Other information

Version #: 06

Viscosity

939043

Explosive properties Not explosive.

Revision date: 03-December-2018

SDS US Cem EZ™

Issue date: 15-February-2018

Oxidizing properties Not oxidizing

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials. Freezing temperatures.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Decomposition is not expected under normal conditions of use and storage. For hazardous

combustion products, see section 5.

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful. May cause an allergic skin reaction. Skin contact

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components **Test Results** Species

Titanium compound (CAS Proprietary)

Acute

Inhalation

LC50 Rat 3.43 mg/l, 4 Hours

Oral

LD50 Rat > 5000 mg/kg

Skin corrosion/irritation Serious eye damage/eye

irritation

Prolonged skin contact may cause temporary irritation. Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Due to the form of the product, exposure to the potentially carcinogenic components is not

expected.

IARC Monographs. Overall Evaluation of Carcinogenicity

Fluoride compound (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans. Glass compound (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans.

Titanium compound (CAS Proprietary) 2B Possibly carcinogenic to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Cem EZ™ SDS US 5/7

939043 Version #: 06 Revision date: 03-December-2018 Issue date: 15-February-2018 **Chronic effects** Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components Species Test Results

Titanium compound (CAS Proprietary)

Aquatic

Acute Crustacea

Crustacea EC50 Daphnia magna > 100 mg/l, 48 Hours Fish LL50 Oryzias latipes > 100 mg/l, 96 Hours

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethoxylated bisphenol A dimethacrylate esters (CAS 5.3 - 5.62

41637-38-1)

Mobility in soil No data available for this product.

Other adverse effects None known.

13. Disposal considerations

Disposal instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Annex II of MARPOL 73/78 and

the IBC Code

Not established.

15. Regulatory information

US federal regulations This n

This mixture is a product regulated by the FDA. Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]: this mixture is considered hazardous.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Cem EZ™ SDS US

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

Yes

Classified hazard categories

Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Titanium compound (CAS Proprietary)

US. New Jersey Worker and Community Right-to-Know Act

Fluoride compound (CAS Proprietary) Glass compound (CAS Proprietary) Titanium compound (CAS Proprietary)

US. Pennsylvania Worker and Community Right-to-Know Law

Fluoride compound (CAS Proprietary) Titanium compound (CAS Proprietary)

US. Rhode Island RTK

Fluoride compound (CAS Proprietary) Glass compound (CAS Proprietary) Titanium compound (CAS Proprietary)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Glass compound (CAS Proprietary) Titanium compound (CAS Proprietary)

16. Other information, including date of preparation or last revision

15-February-2018 Issue date 03-December-2018 Revision date

Version # 06

NFPA ratings



Disclaimer

Danville Materials cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Cem EZ™ SDS US