

SAFETY DATA SHEETS

This SDS packet was issued with item:

074383667

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).

074383709

KERR

Material Safety Data Sheet

in accordance with Community Regulation 2006/1907/EC (R.E.A.Ch.)

Revision Date: 19th September 2008

SECTION 1

Product & Company identification

1.1 Product name

TEMP BOND BASE (tubes and dual syringes)

1.2 Uses/Application:

Dental temporary cement.

1.3 Company (Name, address and info phone number)

KERR ITALIA S.r.l.

Via Passanti, 332

84018 Scafati (SA) - Italy

Free Phone: 00-800-41-050-505

1.4 Emergency phone (according to communitarian directive 99/45/EC, article 17)

+39.081.8508.325 (08.00-17.00, European time, GMT+1)

E-mail address: safety@kerrhawe.com

SECTION 2

Hazard identification

2.1 Hazard classification (according to communitarian directives 67/548/EEC & 99/45/EC)

Dangerous for environment.

2.2 Other hazard

None.

SECTION 3

Composition/Information on Ingredients

(according to communitarian directives 67/548/EEC, 99/45/EC & 2001/58/EC)

3.1 Hazardous ingredients

HAZARDOUS INGREDIENTS	%	HAZARD SYMBOLS	RISK PHRASES	CAS N.	EINECS N.
Zinc Oxide (ZnO)	85-90	N	50/53	1314-13-2	215-222-5

3.2 Other non-hazardous ingredients

None.

SECTION 4**First aid measures**

- 4.1 Treatment for eye contact: Flush with water for at least 15 minutes.
- 4.2 Treatment for skin contact: Wash with soap and water.
- 4.3 Treatment for inhalation (breathing): None.
- 4.4 Treatment for ingestion (swallowing): Consult a physician.

SECTION 5**Fire-fighting Measures**

- 5.1 Suitable extinguishing media: Carbon dioxide, foam, dry chemical.
- 5.2 Forbidden extinguishing media: Not applicable.
- 5.3 Special fire fighting measures: Not applicable.
- 5.4 Unusual fire and explosion hazards: Not applicable.
- 5.5 Special protection equipment: Not applicable.

SECTION 6**Accidental Release Measures**

- 6.1 Personal Precautions: Adopt precautions listed in following sections (VII and VIII).
- 6.2 Environmental Precautions: Do not allow product reaching rivers or sewers and avoid soil contamination. Avoid dust formation which could be spread by wind.
- 6.3 Reclaiming Methods: Absorb spill with paper towels and transfer into suitable containers.

SECTION 7**Handling and Storage** (according to article 5 of communitarian directive 98/24/EC)

- 7.1 Handling Precautions: Adopt precautions listed in following sections (VII and VIII).
- 7.2 Precautions in case of Fire and Explosion: Not applicable.
- 7.3 Storage Conditions: Store at ambient temperature.
- 7.4 Suggested container(s): The original containers provided by manufacturer.
- 7.5 Indication for Combined Storage: Not available.
- 7.6 Environmental precautions: Store in a dry place far from sewers and water.
- 7.7 Other Precautions: Use according to directions and good personal hygiene and safety practices. Do not invert caps on tubes as this will cause hardening of material in the tubes (Refers to tubed variety only).

SECTION 8**Exposure controls/personal protection**

8.1 Exposure Limits:	ZnO: TWA: 0,6 ppm (2 mg/m ³); TLV: 3 ppm (10 mg/m ³);
	Corn Starch TWA: 10 mg/m ³

8.2 Exposure control measures**8.2.1 Precautionary Measures:**

(according to communitarian directives 89/686/EEC & article 4 of 98/24/EC)

Ventilation:	<u>Local Exhaust Ventilation:</u> Not necessary. <u>Special Ventilation:</u> None. <u>Mechanical (General) Ventilation:</u> None. <u>Other Ventilation:</u> None.
Respiratory Protection:	None required.
Hands Protection:	Use of disposable vinyl gloves is optional.
Eyes Protection:	Safety glasses or goggles optional.
Skin Protection:	Handle in accordance with good personal hygiene and safety practices.
Other Protective Equipments:	Not applicable (use of a lab coat is optional).

*Measures listed in this paragraph are to be considered as indications and NOT prescriptions (89/656/EEC)***8.2.2 Environment exposure control measures**

Not Applicable.

SECTION 9**Physical and Chemical Properties****9.1 General information**

<u>Appearance:</u> White paste.	<u>Odour:</u> Odourless.
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9.2 Information related to health, safety and environment

<u>pH:</u> Not applicable (N/A)	<u>Relative density:</u> Not available
<u>Boiling point:</u> Not applicable	<u>Specific gravity:</u> > 1 g/ml
<u>Flash point:</u> Not applicable	<u>Solubility:</u> Insoluble
<u>Flammability:</u> Not flammable.	<u>Partition coefficient n-octanol/water:</u> N/A
<u>Lower Explosivity Limit (L.E.L.):</u> N/A	<u>Viscosity:</u> Not applicable
<u>Upper Explosivity Limit (U.E.L.):</u> N/A	<u>Vapor density (air = 1):</u> N/A
<u>Oxidizing properties:</u> None	<u>Evaporation rate (n-butane = 1):</u> Not applicable
<u>Vapour pressure:</u> > 1	<u>Melting point:</u> Not applicable

9.3 Other information (according to communitarian directive 94/9/EC):

<u>Miscibility:</u> N/D.	<u>Conducibility:</u> N/D
<u>Solubility in Lipids:</u> Not available	<u>Gases Group:</u> N/A

SECTION 10**Stability and Reactivity**Stability: Stable.10.1 Conditions to avoid: Avoid contact with strong acids.10.2 Materials to avoid (incompatibility): Strong acids (Nitric acid).10.3 Hazardous decomposition products: When in contact with Nitric acid, may generate Nitrous oxide.Other precautions:Hazardous Polymerization Products: Will not occurSafety significance in case of change in physical appearance: None knownStabilizers: Product is not required to be stabilized.**SECTION 11****Toxicological Information**CMR effects (Carcinogenicity, Mutagenicity and toxicity for reproduction):

None.

Effects and hazards of eye contact: May cause mild irritation.Effects and hazards of skin contact: Prolonged exposure may cause a mild irritation.Effects and hazards of Inhalation (Breathing): It is an unlikely event.Effects and hazards of Ingestion (Swallowing): May cause gastric pain.Effects for prolonged Exposure: Not determined.Toxic-kinetic effects: Unknown.Effects on metabolism: Unknown.Toxicological data for ingredients:

ZnO		
(Acute toxicity):	LD ₅₀ (oral mouse)	7950 mg/Kg
	LD ₅₀ (skin rat)	> 2000 mg/Kg
	LD _{Lo} (oral human)	500 mg/Kg
	LC ₅₀ (inhalation rat/4hrs)	> 5700 mg/m ³ (4 hrs)

SECTION 12**Ecological Information**

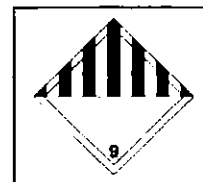
Refer to data regarding Zinc Oxide.

12.1 Eco-toxicity: Not available12.2 Mobility: Not available12.3 Persistence and degradability: Not available12.4 Bioaccumulative potential: Not available12.5 Results of PBT (Persistent Bio-Toxicity) assessment: Not available12.6 Other adverse effects: Not availableAquatic toxicity data for ingredients:

ZnO		
(Acute toxicity):	EC ₅₀ (Daphnia magna)	> 1000 mg/l (48 hrs)
	LC ₅₀ (Oncorhynchus mykiss)	1,1 mg/l (96 hrs)
	LC ₅₀ (Lepomis macrochirus)	> 320 mg/l (96 hrs)
	LC ₅₀ (Pimephales promelas)	2246 mg/l (96 hrs)
	EC ₅₀ (Selenastrum capricornutum)	0,17 mg/l (72 hr; Lisecc 1997)

SECTION 13**Disposal considerations**

Dispose of in accordance of local regulations.

SECTION 14**Transport information**14.1 Sea transportation (IMDG)UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-FStowage/segregation: Category A; Limited Quantity: 5KgProper shipping name: Environmentally hazardous substance, solid, n.o.s.14.2 Air transportation (ICAO/IATA)UN number: 3077; Class: 9; Packing group: III; Label: 9Maximum quantities: No limits (both for Passenger Aircraft and Cargo Aircraft only)Limited Quantity: 30Kg G; Proper shipping name: Environmentally hazardous substance, solid, n.o.s.14.3 Transportation by Road/Railway (RID/ADR)UN number: 3077; Class: 9; Packing group: III (12°C); Hazard identification n°: 90 Label: 9Proper shipping name: Environmentally hazardous substance, solid, n.o.s.Limited Quantity: LQ27 (6Kg/30Kg for combined, 6Kg/20Kg for bandaged trays).

SECTION 15 (Classification according to communitarian directives 67/548/EEC & 99/45/EC)**Regulatory information**

Hazard labelling not required.

This product is an exempted medical device (directive 1999/45/EC, article 1, paragraph 5g).

SECTION 16**Other information**16.1 Risk phrases of all ingredients

50/53 Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

16.1.1 Safety phrases of all ingredients

60 This material and its container must be disposed of as hazardous waste

61 Avoid release to the environment. Refer to special instructions / safety data sheets

16.2 Sources of key data used to compile the Safety Data Sheet:

European Chemicals Bureau (ECB – www.ecb.jrc.it)

European chemical Substances Information System (ESIS - www.ecb.jrc.it/esis)

A.C.G.I.H. (www.acgih.org)

N.I.O.S.H. (www.cdc.gov/niosh/)

O.S.H.A. (www.osha.gov/)

U.E. (www.europa.eu/index_it.htm)

I.A.R.C. (www.iarc.fr/)

N.T.P. (www.ntp.niehs.nih.gov)

European Community Directives:

67/548/EEC:	Classification, packaging and labelling of dangerous substances.
99/45/EC:	Directive concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.
2001/58/EC:	Second amendment of directive 91/155/EEC for the definition of a detailed arrangement of specific information relating to dangerous preparations (art. 14 of 99/45/EC) and substances (art. 27 of 67/548/EEC).
89/656/EEC:	Directive on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace (third individual directive within the meaning of Article 16 (1) of Directive 89/391/EEC).
89/686/EEC:	Approximation of the laws of the Member States relating to personal protective equipment.
94/9/EC:	Approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres
98/24/EC:	Protection of the health and safety of workers from the risks related to chemical agents at work.

Document modification history: First version in compliance of Community Regulation 2006/1907/EC (R.E.A.Ch.)

CAUTION: PRODUCT FOR PROFESSIONAL USE

The information on this Safety Sheet is based on presently available data and to our best knowledge for the correct handling of the product under normal conditions. Any use of this product in any way not indicated on this Sheet or the use of this product together with any other process/procedure will be exclusively under the user's responsibility. This document does not constitute explicit or implicit warranty of product quality or fitness for a particular purpose.

Section 1. Identification

GHS product identifier : Temp-Bond Base

Other means of identification : Not available.

Product type : Paste.

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

Product use : Dental product: Temporary cement

Area of application : Professional applications.

Manufacturer : **Kerr Corporation**
1717 West Collins Avenue
Orange, CA 92867-5422
Telephone no.: 1-800-KERR-123

e-mail address of person responsible for this SDS : edwin.varela@kavokerrgroup.com

Emergency telephone number (with hours of operation) : CHEMTREC® (24 hours) U.S. : 1-800-424-9300 International: +1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Health effects are based on the uncured material.

Classification of the substance or mixture : EYE IRRITATION - Category 2B

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 89.3%

GHS label elements

Signal word : Warning

Hazard statements : Causes eye irritation.

Precautionary statements

Prevention : Wear eye or face protection. Wash hands thoroughly after handling.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.
Product code : Not available.

Ingredient name	Other names	%	CAS number
zinc oxide	zinc oxide	60-100	1314-13-2
White mineral oil (petroleum)	White mineral oil (petroleum)	5-10	8042-47-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.

Inhalation : No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Skin contact : No special measures required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Get medical attention if adverse health effects persist or are severe.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
 irritation
 watering
 redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
 irritation
 dryness
 cracking

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

- Specific treatments** : No specific treatment.
- Protection of first-aiders** : In case of major fire and large quantities: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

- Special protective actions for fire-fighters** : In case of major fire and large quantities: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Low release. For professional use only. Handling of product in very small amounts or in situations where release is highly unlikely
- For emergency responders** : Low release. See also the information in "For non-emergency personnel".

- Environmental precautions** : Low release. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.
- Large spill** : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : No special measures are required for small quantities under normal and intended conditions of product use. For professional use only. Put on appropriate personal protective equipment (see Section 8). Handle with care and dispose in a safe manner.

Section 7. Handling and storage

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
zinc oxide	NIOSH REL (United States, 10/2013). CEIL: 15 mg/m ³ Form: Dust TWA: 5 mg/m ³ 10 hours. Form: Dust and fumes STEL: 10 mg/m ³ 15 minutes. Form: Fume OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Fume STEL: 10 mg/m ³ 15 minutes. Form: Fume TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Fume TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust ACGIH TLV (United States, 4/2014). TWA: 2 mg/m ³ 8 hours. Form: Respirable fraction STEL: 10 mg/m ³ 15 minutes. Form: Respirable fraction
White mineral oil (petroleum)	ACGIH TLV (United States, 4/2014). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2013). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours.

Appropriate engineering controls

: No special measures are required for small quantities under normal and intended conditions of product use.

Environmental exposure controls

: No special measures are required for small quantities under normal and intended conditions of product use.

Individual protection measures

Hygiene measures

: No special measures are required for small quantities under normal and intended conditions of product use.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : No special measures are required for small quantities under normal and intended conditions of product use.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : No special measures are required for small quantities under normal and intended conditions of product use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Solid. [Paste.]
- Color** : Off-white.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : >1 [Water = 1]
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- SADT** : Not available.
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : Avoid excessive heat.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-

- Conclusion/Summary** : Based on the criteria of the protocol, this product is considered cytotoxic per USP 23. Based on analysis and test results, this product is considered as biocompatible per EN ISO 7405:2008 and EN ISO 10993-1:2009.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Conclusion/Summary

- Skin** : Kligman score: Grade I (weak sensitizer)

Mutagenicity

Not available.

- Conclusion/Summary** : No mutagenic effect.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Name	Result
White mineral oil (petroleum)	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes eye irritation.
Inhalation : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
 irritation
 dryness
 cracking
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
zinc oxide	Acute EC50 0.042 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
zinc oxide	-	60960	high
White mineral oil (petroleum)	>6	-	high

Mobility in soil







Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN3077	UN3077	UN3077
UN proper shipping name	Environmentally hazardous substances, solid, n.o.s. (zinc oxide). Marine pollutant (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)
Transport hazard class(es)	9  	9  	9  
Packing group	III	III	III

Date of issue/Date of revision

: 02/09/2015

Date of previous issue

: No previous validation

Version : 1

8/11

Section 14. Transport information

Environmental hazards	Yes.	Yes.	Yes.
Additional information	<p>Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg.</p> <p>Limited quantity Yes.</p> <p>Special provisions 8, 146, 335, A112, B54, B120, IB8, IP3, N20, T1, TP33</p>	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Emergency schedules (EmS) F-A, S-F</p> <p>Special provisions 274, 335, 966, 967</p>	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Passenger and Cargo Aircraft Quantity limitation: 400 kg Packaging instructions: 956</p> <p>Cargo Aircraft OnlyQuantity limitation: 400 kg Packaging instructions: 956</p> <p>Limited Quantities - Passenger AircraftQuantity limitation: 30 kg Packaging instructions: Y956</p> <p>Special provisions A97, A158, A179</p>

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 307: zinc oxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
zinc oxide White mineral oil (petroleum)	60-100 5-10	No. No.	No. No.	No. No.	Yes. Yes.	No. No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	zinc oxide	1314-13-2	60-100
Supplier notification	zinc oxide	1314-13-2	60-100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: ZINC OXIDE FUME
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ZINC OXIDE; MINERAL OIL (UNTREATED and MILDLY TREATED)
- Pennsylvania** : The following components are listed: ZINC OXIDE (ZNO)
- California Prop. 65**

None of the components are listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue/Date of revision	: 02/09/2015
Date of previous issue	: No previous validation
Version	: 1
Prepared by	: IHS
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Section 1. Product And Company Identification

Product Name: Temp-Bond Accelerator

Product Use: Dental product: Temporary cement

Manufacturer: Kerr Corporation
1717 W. Collins Ave.
Orange, CA 92867-5422
U.S.A.

Information Phone Number: 1-800-841-1428 (Customer Service)

Chemical Emergency Phone Number (Chemical Spills, Leaks, Fire, Exposure or Accident only):
CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)

SDS Date of Preparation/Revision: February 14, 2019

Section 2. Hazards Identification

GHS Classification:

Eye Irritation Category 2A

Label Elements:

Warning!



Hazard Phrases

Causes serious eye irritation.

Precautionary Phrases:

Wear eye or face protection.

Wash hands thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Section 3. Composition/Information on Ingredients

Component	CAS No.	Amount
Eugenol	97-53-0	30-60%

Section 4. First Aid Measures

Inhalation: Remove victim to fresh air. Get immediate medical attention if symptoms occur.

Skin Contact: Flush thoroughly with water. Get medical attention if irritation or symptoms of exposure develop. Remove and launder contaminated clothing before re-use.

Eye Contact: Rinse thoroughly with water. Get medical attention if irritation occurs and persists.

Ingestion: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Keep the victim calm and warm. Get immediate medical attention.

Most important symptoms and effects, acute and delayed: Causes serious eye irritation. Ingestion can cause irritating to mouth, throat and stomach.

Indication of immediate medical attention and special treatment, if needed: None required under normal conditions of use.

Section 5. Fire Fighting Measures

Suitable (and Unsuitable) Extinguishing Media: Use any media appropriate for the surrounding fire. Cool fire exposed containers with water.

Specific Hazards Arising from the Chemical: Combustion may produce carbon dioxide and carbon monoxide.

Special Protective Equipment and Precautions for Fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored. Cool fire-exposed containers with water. Contain water used in firefighting from entering sewers or natural waterways.

Section 6: Accidental Release Measures

Personal precautions, Protective equipment, and Emergency procedures: Evacuate spill area and keep unprotected personnel away. Avoid contact with eyes, skin and clothing. Wear appropriate protective clothing and equipment.

Environmental Precautions: Avoid releases to the environment. Report spill as required by local and federal regulations.

Methods and Materials for Containment and Cleaning up: Prompt cleanup and removal are necessary. Absorb spills with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Precautions for Safe Handling: Prevent contact with eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly with soap and water after handling. Do not eat, drink or smoke in the work area. Remove and wash contaminated clothing before reuse.

Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, well-ventilated area away from direct sunlight. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Eugenol	None Established

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where the occupational exposure limits are exceeded, an approved respirator with particulate cartridges is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Hand protection: Impervious gloves are suggested to prevent skin contact. Contact your glove supplier for selection assistance.

Eye Protection: Chemical safety goggles are recommended if contact is possible.

Skin Protection: Wear protective clothing as needed to avoid skin contact and contamination of personal clothing.

Hygiene measures: Suitable eye and skin washing facilities should be available in the work area.

Section 9. Physical and Chemical Properties

Appearance:	Light amber paste	Odor:	Fatty acid
Odor Threshold:	Not available	pH:	Not available
Melting/Freezing Point:	Not available	Boiling Point/Range:	Not available
Flash Point:	Not available	Evaporation Rate:	Not available
Flammability: (Solid, Gas)	Not applicable	Flammability Limits:	LEL: Not available UEL: Not available
Vapor Pressure:	Not available	Vapor Density:	Not available
Relative Density:	>1	Solubilities:	Insoluble in water
Partition Coefficient: (N-Octanol/Water)	Not available	Autoignition Temperature:	Not available
Decomposition	Not available	Viscosity:	Not available

Temperature:

Section 10. Stability and Reactivity

Reactivity: The product is not expected to be reactive.

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to avoid: Avoid excessive heat.

Incompatible Materials: No data available.

Hazardous decomposition products: None if stored normally.

Section 11. Toxicological Information
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Potential Health Effects:

Inhalation: No data available.

Skin Contact: No data available.

Eye Contact: Causes serious eye irritation.

Ingestion: Swallowing may cause gastrointestinal irritation and symptoms similar to those described under inhalation.

Chronic Hazards: None expected.

Skin Sensitization: No adverse effects expected. Components are not sensitizers.

Respiratory Sensitization: No data available. This product is not expected to cause respiratory sensitization.

Germ Cell Mutagenicity: None of the components have shown mutagenic activity in animal studies.

Carcinogen:

Eugenol is listed as "The Agent is not Classifiable as to its Carcinogenicity to Humans" (Group 3) by IARC.

None of the other components are listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

Developmental / Reproductive Toxicity: None of the components have been shown to cause reproductive or developmental toxicity.

Specific Target Organ Toxicity (Single Exposure): No data available.

Specific Target Organ Toxicity (Repeated Exposure): No data available.

Aspiration Toxicity: Not an aspiration hazard.

Acute Toxicity Values:

Product ATE: 6166.1 mg/kg (Oral)

Eugenol: LD50 Oral rat: 1930 mg/kg

Section 12. Ecological Information

Toxicity:

Eugenol: 96 hr LC50 Pimephales promelas 24 mg/L

This product is classified as toxic to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

Persistence and degradability: Eugenol is readily diodegradable.

Bioaccumulative Potential:

Eugenol: log P_{ow} 2.27, potential for bioaccumulative is low.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

Section 13. Disposal Considerations

Disposal: For unused product, dispose of in accordance with Federal and local regulations.

Container Disposal: Dispose of empty container in accordance with Federal and local regulations.

Section 14. Transport Information

	UN Number	UN Proper Shipping Name	Hazard Class(s)	Packing Group	Environmental Hazards
US DOT	None	Not Regulated	None	None	None
EU ADR/RID	None	Not Regulated	None	None	None
IMDG	None	Not Regulated	None	None	None
IATA/ICAO	None	Not Regulated	None	None	None

Special Precautions for User: None identified

Transport in Bulk According to Annex II MARPOL 73/78 and the IBC Code: Not applicable – product is transported only in packaged form.

Section 15. Regulatory Information

U.S. Federal Regulations:

EPA SARA 311/312 Hazard Classification: Refer to Section 2 for OSHA Hazard Classification.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

International Inventories

US EPA TSCA Inventory: All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

Canada CEPA: All of the components of this material are listed on the DSL or exempt.

Section 16. Other Information

Effective Date: February 14, 2019

Supersedes Date: February 9, 2015

Revision Summary: All Sections – New SDS format

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, KERR Corporation makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.