

**Section 1. Identification**

**GHS product identifier** : Tubli-Seal™ Xpress  
**Other means of identification** : Not available.  
**Product type** : Base: Paste.  
Catalyst.: Viscous liquid.

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

**Product use** : Dental product: Endodontic Obturation Systems and Fill Products  
**Area of application** : Professional applications.

**Manufacturer** : **SybronEndo Endodontics**  
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 2A  
SKIN SENSITIZATION - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 89.5%

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : Causes serious eye irritation.  
May cause an allergic skin reaction.

**Precautionary statements**

**Prevention** : Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

## Section 2. Hazards identification

<b>Response</b>	: IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Avoid contact with skin and clothing. Wash thoroughly after handling.
<b>Hazards not otherwise classified</b>	: Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

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

### CAS number/other identifiers

<b>CAS number</b>	: Not applicable.
<b>Product code</b>	: Not available.

Ingredient name	Other names	%	CAS number
zinc oxide	zinc oxide	60-100	1314-13-2
eugenol	eugenol	30-60	97-53-0
White mineral oil (petroleum)	White mineral oil (petroleum)	10-30	8042-47-5
5,5'-diisopropyl-2,2'-dimethylbiphenyl-4,4'-diyl dihydroiodide	5,5'-diisopropyl-2,2'-dimethylbiphenyl-4,4'-diyl dihydroiodide	5-10	552-22-7

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

<b>Eye contact</b>	: No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.
<b>Inhalation</b>	: No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Skin contact</b>	: No special measures required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 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

<b>Eye contact</b>	: Causes serious eye irritation.
<b>Inhalation</b>	: No known significant effects or critical hazards.

## Section 4. First aid measures

- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : Irritating to mouth, throat and stomach.
- Over-exposure signs/symptoms**
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
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.
- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
halogenated compounds  
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.
- 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	<b>NIOSH REL (United States, 10/2013).</b> CEIL: 15 mg/m <sup>3</sup> Form: Dust TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Dust and fumes STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>ACGIH TLV (United States, 6/2013).</b>

## Section 8. Exposure controls/personal protection

White mineral oil (petroleum)

TWA: 2 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction  
 STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Respirable fraction  
**ACGIH TLV (United States, 6/2013).**  
 TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction  
**NIOSH REL (United States, 10/2013).**  
 TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist  
 STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist  
**OSHA PEL (United States, 2/2013).**  
 TWA: 5 mg/m<sup>3</sup> 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.

#### 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

: Base: Paste.  
 Catalyst.: Viscous liquid.

#### Color

: Base: Off-white.  
 Catalyst.: Amber.

#### Odor

: Base: Odorless.  
 Catalyst.: Oil of cloves.

#### Odor threshold

: Not available.

#### pH

: Not available.

#### Melting point

: Not available.

#### Boiling point

: Not available.

## Section 9. Physical and chemical properties

Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: >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
eugenol	LD50 Oral	Rat	1930 mg/kg	-
White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-
5,5'-diisopropyl-2,2'-dimethylbiphenyl-4,4'-diyl dihydroiodide	LD50 Oral	Rat	980 mg/kg	-

**Conclusion/Summary** : Based on the criteria of the protocol, this product is considered cytotoxic per USP 23.

#### Irritation/Corrosion

## Section 11. Toxicological information

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.

### Mutagenicity

Not available.

**Conclusion/Summary** : No mutagenic effect.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
eugenol	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

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 serious eye irritation.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

**Ingestion** : Irritating to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

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

**Inhalation** : No specific data.

## Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
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. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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

Route	ATE value
Oral	3878.9 mg/kg

## 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
eugenol	Acute LC50 24000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours



## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
eugenol	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
zinc oxide	-	60960	high
eugenol	2.27	-	low
White mineral oil (petroleum)	>6	-	high

### Mobility in soil







Soil/water partition coefficient (K<sub>oc</sub>) : 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
<b>UN number</b>	UN3082	UN3082	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. (zinc oxide). Marine pollutant (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)	Environmentally hazardous substance, liquid, n.o.s. (zinc oxide)
<b>Transport hazard class(es)</b>	9  	9  	9  
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	Yes.	Yes.	Yes.
<b>Additional information</b>	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.  <b>Limited quantity</b> Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  <b>Emergency schedules (EmS)</b> F-A, S-F  <b>Special provisions</b> 274, 335	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  <b>Passenger and Cargo Aircraft</b> Quantity limitation: 450 L Packaging instructions: 964 <b>Cargo Aircraft Only</b> Quantity limitation: 450 L Packaging instructions: 964 <b>Limited Quantities - Passenger Aircraft</b> Quantity

## Section 14. Transport information

	<b>Special provisions</b> 8, 146, 173, 335, IB3, T4, TP1, TP29	limitation: 30 kg Packaging instructions: Y964  <b>Special provisions</b> A97, A158
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**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

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
zinc oxide	60-100	No.	No.	No.	Yes.	No.
eugenol	30-60	No.	No.	No.	Yes.	No.
White mineral oil (petroleum)	10-30	No.	No.	No.	Yes.	No.
5,5'-diisopropyl-2,2'-dimethylbiphenyl-4,4'-diyl dihypiodite	5-10	No.	No.	No.	Yes.	No.

### SARA 313

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

## Section 15. Regulatory information

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; STARCH DUST; BARIUM SULFATE
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ZINC OXIDE; MINERAL OIL (UNTREATED and MILDLY TREATED); BARIUM SULFATE; SULFURIC ACID, BARIUM SALT (1:1)
- Pennsylvania** : The following components are listed: ZINC OXIDE (ZNO); STARCH; BARIUM SULFATE
- California Prop. 65**

None of the components are listed.

## Section 16. Other information

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

Health	*	2
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.)



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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** : 01/14/2015
- Date of previous issue** : No previous validation
- Version** : 1
- Prepared by** : IHS

## Section 16. Other information

### 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.