

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

076496061

**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).**

076496046 076496020 076496038 076496053 076496079 076496087 076496095



# MATERIAL SAFETY DATA SHEET

M.S.D.S. #00310

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December 15, 2005

## 1. Chemical Product and Contact Information

**Product Name:** TempSpan® Indirect Temporary Crown and Bridge Material  
**Material Safety Sheet Number:** 00310  
**Date of Issue:** 12/15/05  
**Revision Date:** Not Applicable  
**Company Identification:** Pentron Laboratory Technologies, LLC  
 Wallingford, CT U.S.A. 06492  
 Phone: 203-303-2010  
**Emergency Information Chemtrec:** 800-424-9300  
**Chemtrec International:** 202-483-7616

## 2. Composition/Information on Ingredients

**Chemical characteristics:** Mixture of polyfunctional methacrylate resins of EBPADMA and UDMA, BIS-GMA, HDDMA, methacrylic phosphate, polymerization initiators, stabilizers, pigments and inorganic fillers.\*  
**Description:** Light and self-curing dental resin composite.  
**Hazardous components:**

Element	CAS #	Exposure Limit mg/m <sup>3</sup>	
		OSHA PEL	ACGIH TLV
EBPADMA	41637-38-1	N/E	N/E
UDMA	74389-53-0	N/E	N/E
BIS-GMA	1565-94-2	N/E	N/E
HDDMA	6606-59-3	N/E	N/E
Methacrylate Phosphate	32435-45-4	N/E	N/E
Dual-Cure System	Various	N/E	N/E
Pigments	Various	N/E	N/E
Silane treated barium glass	N/E	N/E	N/E
Silica (amorphous)	69012-64-2	N/E	2R

\* contains a small amount of alumina.

## 3. Hazard Identification

**Risk identification:** None known.  
**Special risks for human beings and environment:** None known.  
**Classification:** Not Hazardous. Those people known to be allergic to methacrylate resins should avoid the use of this product.

## 4. First Aid Measures

**After skin contact:** Wash with plenty of soap and water.  
**After eye contact:** Rinse with plenty of water and contact an ophthalmologist.  
**After swallowing:** Seek medical advice immediately.

## 5. Fire Fighting Measures

**Extinguishing media:** CO<sub>2</sub>, water, dry chemical.  
**Protective equipment:** Unknown.

## 6. Accidental Release Measures

**Personal precautions:** Unknown  
**Environmental precautions:** Unknown  
**Methods for cleaning up:** Avoid skin contact, wear protective equipment. Absorb with inert material. Collect in closed containers and dispose in accordance with Federal, State, and local regulations.  
**Additional information:** Unknown

## 7. Handling and Storage

**Handling:** Practice general hygienic measures.  
**Storage:** Refrigeration required. Store at 36°-55°F (2°-13°C) away from direct sunlight, initiators, oxidizing, and/or reducing agents.



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### 8. Exposure Controls/Personal Protection

Personal protective equipment: Protective gloves, goggles are recommended.  
 General measure of protection and hygiene: Normal hygienic measures.  
 Respiration: Protective mask.  
 Hands: Protective gloves.  
 Eyes: OSHA approved goggles.

### 9. Physical and Chemical Properties

Appearance: Form: Composite gel with base and catalyst as two components.  
 Color: Tooth colored.  
 Odor: Nearly odorless.

Information on change in the physical state

Melting point/melting range: Unknown.  
 Boiling point/boiling range: Unknown.  
 Flash point: Unknown.  
 Autoignition temperature: Unknown.  
 Danger of explosion: Unlikely.  
 Density: 1.4 g/cm<sup>3</sup>  
 Vapor pressure: Unknown.  
 Viscosity: Unknown.  
 pH: Not applicable.  
 Solubility in/miscibility with water: Nearly insoluble.  
 Content of solvents: Unknown.  
 Organic solvents: Unknown.  
 Water: Unknown.  
 Content of solids: Unknown.

### 10. Stability and Reactivity

Incompatibility with other substances: Stable. Avoid exposure of base to peroxide and excessive heat. Avoid exposure of catalyst to amine and excessive heat.

Hazardous decomposition products: Unknown.

### 11. Toxicological Information

Carcinogenicity: None of the components of this material are listed by IARC, NTP, OSHA, or ACIGH as carcinogens.  
 TLV: Unknown.  
 Primary Routes of entry: Inhalation, skin, and eyes.

### 12. Ecological Information

General information: Unknown.

Classification of water endangerment: Unknown.

### 13. Disposal Considerations

Disposal consideration: Dispose of in accordance with Federal, State, and local regulations.

### 14. Transport Information

Not classified as dangerous goods.

### 15. Regulatory Information

Classification according to EEC guidelines: Unknown.

National Prescriptions: Unknown.

Classification according to VbF: Unknown.

### 16. Other Information

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05J527/Rev00

**Section 1. Identification**

**GHS product identifier** : TempSpan® Temporary Crown and Bridge Material - 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 (Kit)  
**Area of application** : Professional applications.

**Manufacturer** : **Pentron Clinical**  
 1717 West Collins Avenue  
 Orange, CA 92867-5422  
 Telephone no.: 1-203-265-7397, Toll Free: 1-800-551-0283

**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** : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 98.8%

**GHS label elements****Hazard pictograms**

**Signal word** : Warning

**Hazard statements** : Causes serious eye irritation.  
 May cause respiratory irritation.

**Precautionary statements**

**Prevention** : Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling.

**Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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.

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## Section 2. Hazards identification

- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known.

## 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
glass, oxide, chemicals	glass, oxide, chemicals	30 - 60	65997-17-3
Poly(oxy-1,2-ethanediyl), $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -[(2-methyl-1-oxo-2-propen-1-yl)oxy]-	Not available.	30 - 60	41637-38-1

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 serious eye irritation.
- Inhalation** : May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Irritating to mouth, throat and stomach.

#### Over-exposure signs/symptoms

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

## Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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** : In case of fire, use water, dry chemical powder or carbon dioxide.
- 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  
nitrogen oxides  
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.

## Section 6. Accidental release measures

- 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 between the following temperatures: 2 to 8°C (35.6 to 46.4°F). 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. Store locked up. 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
glass, oxide, chemicals	<p><b>NIOSH REL (United States, 10/2013).</b> TWA: 3 f/cc 10 hours. Form: Fibers of spec length</p> <p>TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Total</p> <p><b>ACGIH TLV (United States, 6/2013).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p>TWA: 1 f/cc 8 hours. Form: Respirable fibers: length greater than 5 µm; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.</p>

- 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

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## Section 8. Exposure controls/personal 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** : Various
- Odor** : Fruity.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- 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** : Not available.
- Solubility** : Very slightly soluble 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.
- Density** : 1.4 g/cm<sup>3</sup>

## 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.

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## Section 10. Stability and reactivity

**Conditions to avoid** : Protect from sunlight. Initiators. Avoid excessive heat.

**Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials and reducing materials.  
Peroxide.

**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

Not available.

**Conclusion/Summary** : Based on the criteria of the protocol, this product is considered non-cytotoxic per ISO 10993-5.

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

##### Skin

: Based on the criteria of the protocol, this product is considered a negligible irritant per ISO 10993-10.

#### Sensitization

Not available.

#### Conclusion/Summary

##### Skin

: Kligman score: Grade I (weak sensitizer)

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
glass, oxide, chemicals	-	3	-

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
glass, oxide, chemicals	Category 3	Not applicable.	Respiratory tract irritation
Poly(oxy-1,2-ethanediyl), $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -[(2-methyl-1-oxo-2-propen-1-yl)oxy]-	Category 3	Not applicable.	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Not available.

## Section 11. Toxicological information

### Aspiration hazard

Not available.

**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** : May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- 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** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- 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** : No known significant effects or critical hazards.
- 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 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-	3.43 to 5.62	-	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>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-
<b>Transport hazard class(es)</b>	-	-	-
<b>Packing group</b>	-	-	-
<b>Environmental hazards</b>	No.	No.	No.
<b>Additional information</b>	-	-	-

**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.

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## Section 15. Regulatory information

**U.S. Federal regulations** : United States inventory (TSCA 8b): Not determined.

**Clean Air Act Section 112** : Listed

**(b) Hazardous Air Pollutants (HAPs)**

**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
glass, oxide, chemicals	30 - 60	No.	No.	No.	Yes.	No.
Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-	30 - 60	No.	No.	No.	Yes.	No.

**SARA 313**

Not applicable.

**State regulations**

**Massachusetts** : The following components are listed: MINERAL WOOL FIBER

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

**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

## Section 16. Other information

**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

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**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.