

SAFETY DATA SHEET



WEICON Ceramic HC 220 Epoxy Resin

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

1.1 Product identifier

Product name : WEICON Ceramic HC 220 Epoxy Resin
UFI : 01M62-K087-H00M-C6K8
Product code : 105232
Color : Dark grey.
Product description : Epoxy resins
Product type : Liquid.
Other means of identification : Not available.

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

Identified uses

Epoxy resins

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

WEICON GmbH & Co. KG
Königsberger Str. 255,
48157 Münster, Germany
phone: +49 251 93220,
email: info@weicon.de,
URL: www.weicon.de

e-mail address of person responsible for this SDS : msds@weicon.de

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)
TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Muta. 2, H341
Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H341 - Suspected of causing genetic defects.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

Prevention

: P201 - Obtain special instructions before use.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response

: P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage

: P405 - Store locked up.

Disposal

: P501 - Dispose of waste according to applicable legislation.

Hazardous ingredients

: bis-[4-(2,3-epoxipropoxy)phenyl]propane; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol; 4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline] and maleic anhydride

Supplemental label elements

: Contains epoxy constituents. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

: Not applicable.

Tactile warning of danger

: Yes, applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5%	[1] [2]
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 9003-36-5	≥10 - ≤25	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	EC: 249-204-3 CAS: 28768-32-3	≥5 - ≤10	Skin Sens. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411	-	[1] [2]
Phenol, polymer with formaldehyde, glycidyl ether	CAS: 28064-14-4	≥3 - ≤5	Aquatic Chronic 4, H413	-	[1]
Polyamine amides salts	EC: 935-868-8	≥3 - ≤5	Skin Irrit. 2, H315	-	[1]
2-butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	≥0.3 - <1	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Oral] = 1200 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1] [2]
maleic anhydride	REACH #: 01-2119472428-31 EC: 203-571-6 CAS: 108-31-6 Index: 607-096-00-9	≤0.1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372 (respiratory system) (inhalation) EUH071 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 400 mg/kg Skin Sens. 1, H317: C ≥ 0.001%	[1] [2]

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 or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

SECTION 4: First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : 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.

4.2 Most important symptoms and effects, both acute and delayed

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
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

SECTION 5: Firefighting measures

- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

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SECTION 7: Handling and storage

- Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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.

7.2 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. 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. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria		
Category	Notification and MAPP threshold	Safety report threshold
E2	200 tonnes	500 tonnes

7.3 Specific end use(s)

- Recommendations

: Not available.
- Industrial sector specific solutions

: Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
 bis-[4-(2,3-epoxipropoxy)phenyl]propane 4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline] 2-butoxyethanol	DFG MAC-values list (Germany, 7/2024) Skin sensitizer. DFG MAC-values list (Germany, 7/2024) Skin sensitizer. DFG MAC-values list (Germany, 7/2024) Develop C. Absorbed through skin. TWA 8 hours: 10 ppm. PEAK 15 minutes: 20 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 49 mg/m³. PEAK 15 minutes: 98 mg/m³ 4 times per shift [Interval: 1 hour]. TRGS 900 OEL (Germany, 3/2025) Absorbed through skin. TWA 8 hours: 49 mg/m³. PEAK 15 minutes: 98 mg/m³. TWA 8 hours: 10 ppm. PEAK 15 minutes: 20 ppm. EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 20 ppm.

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SECTION 8: Exposure controls/personal protection

maleic anhydride	TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³. DFG MAC-values list (Germany, 7/2024) Develop C. Inhalation sensitizer , Skin sensitizer. TWA 8 hours: 0.02 ppm. CEIL: 0.05 ml/m³. TWA 8 hours: 0.081 mg/m³. CEIL: 0.2 mg/m³. PEAK 15 minutes: 0.081 mg/m³ 4 times per shift [Interval: 1 hour]. PEAK 15 minutes: 0.02 ppm 4 times per shift [Interval: 1 hour]. TRGS 900 OEL (Germany, 3/2025) Inhalation sensitizer , Skin sensitizer. TWA 8 hours: 0.081 mg/m³. CEIL: 0.2025 mg/m³. TWA 8 hours: 0.02 ppm. CEIL: 0.05 ppm. PEAK 15 minutes: 0.081 mg/m³. PEAK 15 minutes: 0.02 ppm.
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Biological exposure indices

Product/ingredient name	Exposure indices
2-butoxyethanol	DFG BEI-values list (Germany, 7/2024) Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposures after several previous shifts. TRGS 903 - BEI Values (Germany, 10/2024) BEI: 150 mg/g creatinine, butoxy acetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposure after several previous shifts.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
 bis-[4-(2,3-epoxipropoxy)phenyl]propane	DNEL - General population - Long term - Dermal 89.3 µg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Oral 0.5 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 0.75 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 0.87 mg/m³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation

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SECTION 8: Exposure controls/personal protection

	4.93 mg/m³ Effects: Systemic
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	DMEL - Workers - Short term - Dermal 8.3 µg/cm² Effects: Local DNEL - General population - Long term - Oral 6.25 mg/kg bw/day Effects: Systemic DNEL - General population - Long term - Inhalation 8.7 mg/m³ Effects: Systemic DNEL - Workers - Long term - Inhalation 29.39 mg/m³ Effects: Systemic DNEL - General population - Long term - Dermal 62.5 mg/kg bw/day Effects: Systemic DNEL - Workers - Long term - Dermal 104.15 mg/kg bw/day Effects: Systemic
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	DNEL - Workers - Long term - Dermal 0.5 mg/kg bw/day Effects: Systemic DNEL - Workers - Long term - Inhalation 3.5 mg/m³ Effects: Systemic
2-butoxyethanol	DNEL - General population - Long term - Oral 6.3 mg/kg bw/day Effects: Systemic DNEL - General population - Short term - Oral 26.7 mg/kg bw/day Effects: Systemic DNEL - General population - Long term - Inhalation 59 mg/m³ Effects: Systemic DNEL - Workers - Long term - Inhalation 98 mg/m³ Effects: Systemic DNEL - General population - Short term - Inhalation 147 mg/m³ Effects: Local DNEL - Workers - Short term - Inhalation 246 mg/m³ Effects: Local DNEL - General population - Short term - Inhalation 426 mg/m³ Effects: Systemic

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SECTION 8: Exposure controls/personal protection

maleic anhydride

- DNEL - Workers - Short term - Inhalation**
1091 mg/m³
Effects: Systemic
- DNEL - General population - Long term - Inhalation**
0.05 mg/m³
Effects: Systemic
- DNEL - General population - Long term - Oral**
0.06 mg/kg bw/day
Effects: Systemic
- DNEL - General population - Long term - Inhalation**
0.08 mg/m³
Effects: Local
- DNEL - Workers - Long term - Inhalation**
0.081 mg/m³
Effects: Local
- DNEL - Workers - Long term - Inhalation**
0.081 mg/m³
Effects: Systemic
- DNEL - General population - Short term - Oral**
0.1 mg/kg bw/day
Effects: Systemic
- DNEL - General population - Short term - Dermal**
0.1 mg/kg bw/day
Effects: Systemic
- DNEL - General population - Long term - Dermal**
0.1 mg/kg bw/day
Effects: Systemic
- DNEL - Workers - Short term - Dermal**
0.2 mg/kg bw/day
Effects: Systemic
- DNEL - Workers - Long term - Dermal**
0.2 mg/kg bw/day
Effects: Systemic
- DNEL - Workers - Short term - Inhalation**
0.2 mg/m³
Effects: Local
- DNEL - Workers - Short term - Inhalation**
0.2 mg/m³
Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

SECTION 8: Exposure controls/personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- 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. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III ; 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Dark grey.
- Odor** : Bland.
- Odor threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >200°C (>392°F)
- Flammability** : Not available.
- Lower and upper explosion limit** : Not available.
- Flash point** : Closed cup: >200°C (>392°F)
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.

SECTION 9: Physical and chemical properties

- pH** : Not applicable.
- Viscosity** : Dynamic (room temperature): 153000 mPa·s
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.
- Solubility** :
Not available.
- Solubility in water** : Not available.
- Partition coefficient n-octanol/
water (log Pow)** : Not applicable.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-butoxyethanol	0.75006	0.1	EU A.4			
Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol	0.62	0.083				
maleic anhydride	0.24752	0.033				

- Relative density** : Not available.
- Density** : 1.63 g/cm³ [20°C (68°F)]
- Relative vapor density** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

- Explosive properties** : Not available.
- Oxidizing properties** : Not available.

9.2.2 Other safety characteristics

- Miscible with water** : No.

SECTION 10: Stability and reactivity

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

Reactive or incompatible with the following materials: alkalis.
Incompatible with amines. Incompatible with alcohols.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name

2-butoxyethanol

Result

Rat - Intraperitoneal - LD50

220 mg/kg

Rat - Intravenous - LD50

307 mg/kg

Rat - Unreported - LD50

917 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Lung, Thorax, or Respiration - Other changes

Mouse - Oral - LD50

1230 mg/kg

Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Somnolence (general depressed activity) Other - Hair

Mouse - Intraperitoneal - LD50

536 mg/kg

Mouse - Intravenous - LD50

1130 mg/kg

Mouse - Unreported - LD50

1050 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Lung, Thorax, or Respiration - Other changes

Rabbit - Dermal - LD50

220 mg/kg

Rabbit - Intraperitoneal - LD50

220 mg/kg

Rabbit - Intravenous - LD50

252 mg/kg

Guinea pig - Oral - LD50

1200 mg/kg

Toxic effects: Behavioral - General anesthetic Gastrointestinal - Other changes Kidney, Ureter, and Bladder - Other changes

Guinea pig - Dermal - LD50

230 ul/kg

Mammal - species unspecified - Unreported - LD50

1500 mg/kg

Mouse - Oral - LD50

1167 mg/kg

Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes Blood - Other hemolysis with or without anemia

Rat - Oral - LD50

917 mg/kg

Toxic effects: Liver - Other changes Kidney, Ureter, and

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SECTION 11: Toxicological information

Bladder - Other changes Blood - Other hemolysis with or without anemia

Rabbit - Oral - LD50
320 mg/kg
Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes Blood - Other hemolysis with or without anemia

Rat - Oral - LD50
250 mg/kg

Mouse - Subcutaneous - LDLo
500 mg/kg

Human - Oral - LDLo
143 mg/kg

Rat - Oral - LDLo
1500 mg/kg
Toxic effects: Lung, Thorax, or Respiration - Changes in pulmonary vascular resistance

Woman - Female - Oral - TDLo
600 mg/kg
Toxic effects: Behavioral - Coma Lung, Thorax, or Respiration - Dyspnea Changes in Chemistry or Temperature - Metabolic acidosis

Woman - Female - Oral - TDLo
7813 ul/kg
Toxic effects: Behavioral - Coma Vascular - BP lowering not characterized in autonomic section Changes in Chemistry or Temperature - Metabolic acidosis

Mammal - species unspecified - Intraperitoneal - TDLo
100 mg/kg
Toxic effects: Endocrine - Change in gonadotropins

Rat - Oral - TDLo
500 mg/kg
Toxic effects: Blood - Other hemolysis with or without anemia

Rat - Unreported - TDLo
250 mg/kg
Toxic effects: Blood - Change in clotting factors

Man - Male - Oral - TDLo
132 mg/kg
Toxic effects: Behavioral - Sleep Kidney, Ureter, and Bladder - Hematuria Changes in Chemistry or Temperature - Metabolic acidosis

Rat - Inhalation - LC50 Gas.
450 ppm [4 hours]
Toxic effects: Behavioral - Ataxia Gross Metabolite Changes - Weight loss or decreased weight gain

maleic anhydride

Rat - Oral - LD50
400 mg/kg

Rabbit - Dermal - LD50
2620 mg/kg

SECTION 11: Toxicological information

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
WEICON Ceramic HC 220 Epoxy Resin	N/A	N/A	N/A	333.3	N/A
2-butoxyethanol	1200	N/A	N/A	3	N/A
maleic anhydride	400	2620	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name

2-butoxyethanol

Result

Rabbit - Skin - Mild irritant

Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

2-butoxyethanol

Result

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 100 mg

maleic anhydride

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 1 %

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

SECTION 11: Toxicological information

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name

maleic anhydride

Result

STOT RE 1, H372 (respiratory system) (inhalation)

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

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.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- 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.

Conclusion/Summary [Product] : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : Suspected of causing genetic defects.

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Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
2-butoxyethanol	Acute - LC50 - Marine water Crustaceans - Common shrimp, sand shrimp - <i>Crangon crangon</i> 800 mg/l [48 hours] <u>Effect</u> : Mortality
	Acute - LC50 - Marine water Fish - Inland silverside - <i>Menidia beryllina</i> 1250 ppm [96 hours] <u>Effect</u> : Mortality
maleic anhydride	Acute - LC50 - Fresh water Fish - Western mosquitofish - <i>Gambusia affinis</i> - Adult 230 ppm [96 hours] <u>Effect</u> : Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	2.7	-	Low
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	2.12	-	Low
2-butoxyethanol	0.81	-	Low
maleic anhydride	-2.78	-	Low

12.4 Mobility in soil

Product/ingredient name	logK _{oc}	K _{oc}
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	4	10465.7
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	2.7	473.712
2-butoxyethanol	1.8	67.3685
maleic anhydride	1.1	11.4841

SECTION 12: Ecological information

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	No	No	No	No	No	No	No
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No	No	No	No	No	No	No
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	No	No	No	No	No	No	No
Phenol, polymer with formaldehyde, glycidyl ether	No	No	No	No	No	No	No
Polyamine amides salts	No	No	No	No	No	No	No
2-butoxyethanol	No	No	No	No	No	No	No
maleic anhydride	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment
Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	No	N/A	N/A	No	N/A	N/A	N/A
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No	N/A	N/A	No	N/A	N/A	N/A
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	No	N/A	N/A	No	N/A	N/A	N/A
Phenol, polymer with formaldehyde, glycidyl ether	No	N/A	N/A	No	N/A	N/A	N/A
Polyamine amides salts	No	N/A	N/A	No	N/A	N/A	N/A
2-butoxyethanol	No	N/A	N/A	No	N/A	N/A	N/A
maleic anhydride	N/A	N/A	N/A	Yes	N/A	N/A	N/A

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	No	No	No	No	No	No	No
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No	No	No	No	No	No	No
4,4'-methylenebis[N,N-bis(2,3-epoxypropyl)aniline]	No	No	No	No	No	No	No
Phenol, polymer with formaldehyde, glycidyl ether	No	No	No	No	No	No	No
Polyamine amides salts	No	No	No	No	No	No	No
2-butoxyethanol	No	No	No	No	No	No	No
maleic anhydride	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

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

12.6 Endocrine disrupting properties

Not available.

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SECTION 12: Ecological information

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Can	15 01 10* packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi) phenyl]propane, Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi) phenyl]propane, Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi) phenyl]propane, Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	Environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxi) phenyl]propane, Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)

SECTION 14: Transport information

14.3 Transport hazard class(es)	9  	9  	9  	9  
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

ADR/RID

- : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Hazard identification number 90

Limited quantity 5 L

Special provisions 274, 335, 601, 375

Tunnel code (-)

ADR Classification Code: M6

ADN

- : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Special provisions 274, 335, 375, 601

IMDG

- : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F

Special provisions 274, 335, 969

IATA

- : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.

Special provisions A97, A158, A197

14.6 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.

14.7 Maritime transport in bulk according to IMO instruments

- : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

None of the components are listed above the relevant limit.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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Product/ingredient name	%	Designation [Usage]
WEICON Ceramic HC 220 Epoxy Resin	≥90	3

Labeling : Not applicable.

Synthetic polymer microparticles - Designation 78

Generic identity of polymer(s) : Not applicable.

Total percentage of synthetic polymer microparticles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
E2

VOC content : 0 %

VOC (g/L) : 0

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
2-butoxyethanol	DFG MAC-values list	-	Develop C	-
maleic anhydride	DFG MAC-values list	-	Develop C	-

Storage class (TRGS 510) : 10

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

Category	Reference number
E2	1.3.2

Hazard class for water : 2

Technical instruction on air quality control (TA Luft)

SECTION 15: Regulatory information

Number [Class]	Description	%
5.2.1	Total dust	6
5.2.5	Organic substances	43.5
5.2.5 [I]	Organic substances	8.5

AOX : The product contains organically bound halogens and can contribute to the AOX value in waste water.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Eurasian Economic Union	: Russian Federation inventory : Not determined.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
B = Bioaccumulative
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement

SECTION 16: Other information

IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
M = Mobile
N/A = Not available
P = Persistent
PBT = Persistent, Bioaccumulative and Toxic
PMT = Persistent, Mobile and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
T = Toxic
vB = Very Bioaccumulative
vM = Very Mobile
vP = Very Persistent
vPvB = Very Persistent and Very Bioaccumulative
vPvM = Very Persistent and Very Mobile

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 2, H341	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH071	Corrosive to the respiratory tract.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 4	AQUATIC HAZARD (LONG-TERM) - Category 4
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Resp. Sens. 1	RESPIRATORY SENSITIZATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1A	SKIN SENSITIZATION - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

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SECTION 16: Other information

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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.