SAFETY DATA SHEET



According to Work Health and Safety (WHS) Australia

Easy-Mix S 50 Epoxy Adhesive Resin

Section 1. Identification

| Product identifier | : | Easy-Mix S 50 Epoxy Adhesive Resin |
|--------------------|---|------------------------------------|
| Product code | : | 106501 |

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

Epoxy resins

| Supplier's details | : 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 |

National contact

WEICON Australia Pty. Ltd 1/55-65 Christensen Road, Stapylton QLD 4207 Phone: +61 493473383 E-Mail: info@weicon.com.au website: www.weicon.com.au

Emergency telephone number

: National Poison Information Center: Tel: 131126 TRANSPORT / EMERGENCY CONTACT (24h): Tel: +61 2 8014 4558 (English) TRANSPORT / EMERGENCY CONTACT (24h): Tel.: 1800 074 234 (English)

Section 2. Hazard(s) identification

| Classification of the substance or mixture | : SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 |
|--|---|
| GHS label elements | |
| Hazard pictograms | |
| Signal word | : WARNING |
| Hazard statements | : H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. |
| Precautionary statements | |
| Prevention | : P261 - Avoid breathing vapor. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves. Wear eye or face protection. |
| Response | 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 | : Not applicable. |
| Disposal | : P501 - Dispose of waste according to applicable legislation. |

Section 2. Hazard(s) identification

Supplemental label : Not applicable. elements

Other hazards which do not : None known. result in classification

Section 3. Composition and ingredient information

Substance/mixture

: Mixture

| Ingredient name | % (w/w) | CAS number | Classification |
|--|-----------|------------|---|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | ≥60 - ≤75 | 1675-54-3 | FLAMMABLE LIQUIDS - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | ≥30 - ≤60 | 9003-36-5 | SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 |
| p-tert-butylphenyl 1-(2,3-epoxy)propyl ether | ≤10 | 3101-60-8 | SKIN SENSITIZATION - Category 1 |
| Phenol, polymer with formaldehyde, glycidyl ether | ≤10 | 28064-14-4 | SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 |

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

Section 4. First aid measures

Description of necessary 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. |
|--------------|--|
| 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 adverse health effects persist or are severe. 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. |
| 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. |

Section 4. First aid measures

| 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 if adverse health effects persist or are severe. 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. |
|-----------|--|
| | |

Most important symptoms/effects, acute and delayed

| Potential acute health effect | <u>s</u> |
|-------------------------------|--|
| 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. |
| Over-exposure signs/sympt | <u>oms</u> |
| 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. |

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 | : 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 ex | tinguishing agent suitable f | or the surrounding fi | ire. |
| Unsuitable extinguishing media | : None know | wn. | | |
| Specific hazards arising from the chemical | : In a fire or | if heated, a pressure incre | ase will occur and th | ne container may burst. |
| Hazardous thermal decomposition products | carbon dic carbon mo | | the following materi | ials: |
| Special protective actions for fire-fighters | | fire. No action shall be take | | the vicinity of the incident if sonal risk or without |
| Date of issue/Date of revision | : 6/25/2025 | Date of previous issue | : 6/15/2025 | Version : 4.5 3/11 |

Section 5. Fire-fighting measures

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

Section 6. Accidental release measures

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". |
| 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). |
| Methods and materials for co | nt | ainment and cleaning up |

| Small spill | : Stop leak if without risk. Move containers from spill area. Dilute with water and mop |
|-------------|---|
| | up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |

Section 7. Handling and storage

Precautions for safe handling

| 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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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. |
| 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. See Section 10 for incompatible materials before handling or use. |

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls and personal protection

| Ingredient name | Exposure limits |
|--|--|
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | DFG MAC-values list (Germany, 7/2022). Skin sensitizer. |
| p-tert-butylphenyl 1-(2,3-epoxy)propyl ether | DFG MAC-values list (Germany, 7/2022). Skin sensitizer. |

| Appropriate engineering controls | : | Good general ventilation should be sufficient to control worker exposure to airborne contaminants. |
|----------------------------------|-----|---|
| 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. |
| Individual protection measur | res | |
| 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. Recommended : organic vapor (Type AX) and particulate filter |

Section 9. Physical and chemical properties

| Date of issue/Date of revision | : 6/25/2025 | Date of previous issue | : 6/15/2025 | Version : 4.5 | 5/11 |
|--------------------------------|-------------|------------------------|-------------|---------------|------|
| Melting point | : Not avail | able. | | | |
| рН | : Not appli | cable. | | | |
| Odor threshold | : Not avail | able. | | | |
| Odor | : Bland. | | | | |
| Color | : Colorles | s to light yellow. | | | |
| Physical state | : Liquid. | | | | |
| Appearance | | | | | |

Section 9. Physical and chemical properties

:

Boiling point, initial boiling : Not available. point, and boiling range

Flash point

| | Closed cup | | | | Open cup | | |
|---|------------|--------|--------|-------|----------|--------|--|
| Ingredient name | °C | °F | Method | °C | °F | Method | |
| bis-[4-(2,3-epoxipropoxi)phenyl] propane | | | | 79 | 174.2 | | |
| Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol | >93 | >199.4 | EU A.9 | | | | |
| Phenol, polymer with formaldehyde, glycidyl ether | 120 | 248 | | | | | |
| p-tert-butylphenyl 1-(2,3-epoxy) propyl ether | | | | 143.3 | 289.9 | | |

Evaporation rate

: Not available.

Flammability

: Not available.

:

: Not available.

Lower and upper explosion limit/flammability limit

Vapor pressure

| | Vapor Pressure at 20°C | | ۱ | /apor pres | essure at 50°C | |
|---|------------------------|--------------|--------|------------|----------------|--------|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| Formaldehyde, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and phenol | 0.62 | 0.083 | EU A.4 | | | |
| p-tert-butylphenyl 1-(2,3-epoxy) propyl ether | 0.00019 | 0.000025 | | | | |
| Relative vapor density | : Not ava | ailable. | | | | |
| Relative density | : Not ava | ailable. | | | | |
| Density | : 1.15 g/ | cm³ [20°C (6 | 68°F)] | | | |
| Solubility(ies) | : | | | | | |
| Not available. | | | | | | |
| Solubility in water | : Not ava | ailable. | | | | |
| Miscible with water | : No. | | | | | |
| Partition coefficient: n- octanol/water | : Not ap | olicable. | | | | |
| Auto-ignition temperature | : Not ap | olicable. | | | | |
| Decomposition temperature | : Not ava | ailable. | | | | |
| /iscosity | : Not ava | ailable. | | | | |
| Flow time (ISO 2431) | : Not ava | ailable. | | | | |
| Particle characteristics | | | | | | |
| | : Not ap | - - - | | | | |

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. Conditions to avoid : No specific data. Date of issue/Date of revision : 6/25/2025 Date of previous issue : 6/15/2025

Section 10. Stability and reactivity

Incompatible materials : No specific data.

| Hazardous decomposition | : Under normal conditions of storage and use, hazardous decomposition products |
|-------------------------|--|
| products | should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|----------------------|---------|-------|--------------------|-------------|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Skin - Mild irritant | Rabbit | - | 24 hours 500 uL | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

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

Not available.

Information on the likely : Not available. routes of exposure

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

Section 11. Toxicological information

| 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. |
| <u>Long term exposure</u> | | |
| Potential immediate effects | : | Not available. |
| Potential delayed effects | : | Not available. |
| Potential chronic health eff | ect | <u>S</u> |
| 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 | : | 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

N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|---|--------|-----|-----------|
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 2.7 | - | Low |

Mobility in soil

| Date of issue/Date of revision | : 6/25/2025 |
|--------------------------------|-------------|
|--------------------------------|-------------|

Section 12. Ecological information

Soil/water partition coefficient (Koc)

: 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. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

| | ADG | ADR/RID | IMDG | ΙΑΤΑ |
|-------------------------------|--|--|--|--|
| UN number | UN3082 | UN3082 | UN3082 | UN3082 |
| 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) |
| Transport hazard class(es) | | 9 | 9 | 9 |
| Packing group | 111 | 111 | 111 | Ш |
| Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| Additional informat | ion | | | |
| ADG | in either an as a dange | t is not regulated as a da IBC, or in other containe rous good when transpo meet the general provis | er types if ≤500 kg. This rted in sizes of ≤5 L or ≤{ | product is not regulated 5 kg, provided the |
| ADR/RID | : This produc | ct is not regulated as a da | angerous good when trai | nsported in sizes of ≤5 L |

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.

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. **Tunnel code** (-)

Section 14. Transport information

| • | | |
|------------------------------|---|---|
| ΙΑΤΑ | : | This product is not regulated as a dangerous good when transported in sizes of \leq 5 L or \leq 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. |
| 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 : Not available. to IMO instruments

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

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 | : All components are listed or exempted. | |
|-------------------------|---|--|
| Canada | : All components are listed or exempted. | |
| China | : All components are listed or exempted. | |
| Eurasian Economic Union | Russian Federation inventory: All components are listed or exempted. | |
| Japan | Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): Not determined. | |
| New Zealand | : All components are listed or exempted. | |
| Philippines | : All components are listed or exempted. | |
| Republic of Korea | : All components are listed or exempted. | |
| Taiwan | : All components are listed or exempted. | |
| Thailand | : Not determined. | |
| Turkey | : Not determined. | |
| United States | : All components are active or exempted. | |
| Viet Nam | : All components are listed or exempted. | |

Section 16. Any other relevant information

| <u>History</u> | |
|--------------------------------|--|
| Date of printing | : 6/26/2025 |
| Date of issue/Date of revision | : 6/25/2025 |
| Date of previous issue | : 6/15/2025 |
| Version | : 4.5 |
| Key to abbreviations | : ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations |

Procedure used to derive the classification

| Classification | Justification |
|--|--------------------|
| SKIN CORROSION/IRRITATION - Category 2 | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |

References

: Not available.

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 abovenamed 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.