SAFETY DATA SHEET



according to Workplace Safety and Health Regulations Singapore

Easy-Mix RK-7200 Structural Acrylic Adhesive Hardener

Section 1. Identification

Product identifier : Easy-Mix RK-7200 Structural Acrylic Adhesive Hardener

Product code : 105642

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

Hardener for resins.

Supplier's details : WEICON GmbH & Co. KG

Königsberger Str. 255

48157 Münster

Germany

Phone: +49 251 93220 Fax: +49(0)251 / 9322 - 244 Internet: www.weicon.de

e-mail address of person responsible for this SDS

: msds@weicon.de

Emergency 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

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3

SKIN CORROSION/IRRITATION - Category 1A

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

GHS label elements, including precautionary statements

Hazard pictograms







Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapor.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H335 - May cause respiratory irritation.

Precautionary statements

Prevention : P280 - Wear protective gloves, protective clothing and eye or face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P241 - Use explosion-proof electrical, ventilating or lighting equipment.

P242 - Use non-sparking tools.

P243 - Take action to prevent static discharges. P271 - Use only outdoors or in a well-ventilated area.

P261 - Avoid breathing vapor.

Section 2. Hazards identification

Response

: P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON

CENTER or doctor. Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER

or doctor

P363 - Wash contaminated clothing 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, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

Storage : P405 - Store locked up.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 - Keep cool.

Disposal : P501 - Dispose of waste according to applicable legislation.

Other hazards which do not : None known.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
methyl methacrylate [stable]	≥25 - ≤50	80-62-6
2-hydroxyethyl methacrylate	≥10 - ≤25	868-77-9
methacrylic acid [stable]	≥10 - <25	79-41-4
[R-(R*,S*)]-[[2-methyl-1-(1-oxopropoxy)propoxy]-(4-phenylbutyl) phosphinyl] acetic acid, (-)-cinchonidine (1:1) salt	≤3	137590-32-0

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 and hence require reporting in this section.

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

Chemical formula : Not applicable.

Section 4. First aid measures

<u>Description of necessary first aid measures</u>

Eye contact

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.

Section 4. First aid measures

Skin contact

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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 effects

Eye contact : Causes serious eye damage.Inhalation : May cause respiratory irritation.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

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 : 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. 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 dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media

: Do not use water jet.

Specific hazards arising from the chemical

: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with

the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide

carbon monoxide nitrogen oxides sulfur oxides

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

: 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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 containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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 breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Section 7. Handling and storage

Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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.

including any incompatibilities

Conditions for safe storage, : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and wellventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
methyl methacrylate [stable]	Workplace Safety and Health Act (Singapore, 2/2006).
	PEL (long term): 100 ppm 8 hours. PEL (long term): 410 mg/m³ 8 hours.
methacrylic acid [stable]	Workplace Safety and Health Act (Singapore, 2/2006).
	PEL (long term): 20 ppm 8 hours. PEL (long term): 70 mg/m³ 8 hours.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

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. Recommended: 1 - 4 hours (breakthrough time): nitrile rubber; 4 - 8 hours (breakthrough time): Viton®/butyl rubber

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

Appearance

Physical state : Liquid. Color : Colorless. Odor : Ethereal. **Odor threshold** : Not available. pН : Not applicable. Melting point/freezing point : Not available. Boiling point, initial boiling : 101°C (213.8°F)

point, and boiling range

Flash point : Closed cup: 23°C (73.4°F)

Evaporation rate : Not available. : Not available. **Flammability** : Not available. Lower and upper explosion

limit/flammability limit

Vapor pressure

	Vapor Pressure at 20°C		Va	por pressur	e at 50°C	
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
methyl methacrylate [stable]	27.75	3.7				
methacrylic acid [stable]	0.73	0.097				
2-hydroxyethyl methacrylate	0.06	0.008	OECD 104			

: Not available. Relative vapor density Relative density : Not available.

Solubility(ies)

Not available.

: Not available. Solubility in water Partition coefficient: n-: Not applicable.

octanol/water

Auto-ignition temperature

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Section 9. Physical and chemical properties

Ingredient name	°C	°F	Method
methyl methacrylate [stable]	400	752	DIN 51794
methacrylic acid [stable]	400	752	

Decomposition temperature: Not available.Viscosity: Not available.Flow time (ISO 2431): Not available.

Particle characteristics

Median particle size : Not applicable.

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.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials: Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SADT : Not available.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methyl methacrylate [stable]	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
2-hydroxyethyl methacrylate	LD50 Oral	Rat	5050 mg/kg	-
methacrylic acid [stable]	LD50 Dermal	Rabbit	500 mg/kg	-
	LD50 Oral	Rat	1060 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Section 11. Toxicological information

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
methyl methacrylate [stable]	Category 3	-	Respiratory tract irritation
methacrylic acid [stable]	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.Inhalation : May cause respiratory irritation.

Skin contact: Causes severe burns. 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 watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

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

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

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.

Section 11. Toxicological information

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

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Easy-Mix RK-7200 Structural Acrylic Adhesive Hardener	5300.0	2500	N/A	N/A	N/A
methyl methacrylate [stable]	7872	N/A	N/A	N/A	N/A
2-hydroxyethyl methacrylate	5050	N/A	N/A	N/A	N/A
methacrylic acid [stable]	1060	500	N/A	N/A	N/A

Acute toxicity estimates

Route	ATE value
Oral	5300 mg/kg
Dermal	2500 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
methyl methacrylate [stable]	Acute LC50 130000 μg/l Fresh water	Fish - Pimephales promelas - Adult	96 hours
2-hydroxyethyl methacrylate	Acute LC50 227000 μg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
methacrylic acid [stable]	Chronic NOEC 53 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days

Persistence/degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
methyl methacrylate [stable]	1.38	-	low
2-hydroxyethyl methacrylate	0.42	-	low
methacrylic acid [stable]	0.93	-	low

Mobility in soil

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA	ADR/RID
UN number	UN1133	UN1133	UN1133	UN1133
UN proper shipping name	ADHESIVES	ADHESIVES	Adhesives	ADHESIVES
Transport hazard class(es)	3	3	3	3
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.

Additional information

UN : Special provisions 223

IMDG : Emergency schedules F-E, S-D

Special provisions 223, 955

<u>Viscous liquid exception</u> This class 3 viscous liquid is not subject to regulation in

packagings up to 450 L according to 2.3.2.5.

IATA : Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions:

355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities -

Passenger Aircraft: 10 L. Packaging instructions: Y344.

Special provisions A3

ADR/RID : Limited quantity 5 L

Tunnel code (E)

Remarks containing flammable liquid (having a flash-point below 23 °C and viscous

according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)

ADR Classification Code: F1

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

Singapore - hazardous chemicals under government control

None.

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 : All components are listed or exempted.

Thailand : Not determined.
Turkey : Not determined.
United States : Not determined.
Viet Nam : Not determined.

Section 16. Other information

<u>History</u>

Date of printing : 5/14/2023 Date of issue/Date of : 5/4/2023

revision

Date of previous issue : 10/20/2022

Version : 3.02

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 = 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 UN = United Nations

Procedure used to derive the classification

Easy-Mix RK-7200 Structural Acrylic Adhesive Hardener

Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 1A SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	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.