

DRY STONEWARE GLAZES

SAFETY DATA SHEET (SDS)

Version: 04 Date of Issue: September 08, 2023

According to: OSHA Hazard Communication Standard 29 CFR 1910.1200(g) Rev. 2012

Section 1 - Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier	
Product Name:	DRY STONEWARE GLAZES
Product Colors:	ANTIQUE BRASS (SD182)
Product sizes:	5 lbs per color
Other Means of Identification:	None known
Product Description:	Powder formulations intended to be diluted in water and used for arts and crafts purposes.

1.2 Relevant identified uses of the substance or mixture

- Relevant identified use(s): Us
 - se(s): Use product for its intended purpose as a glaze product intended for general (adults) arts and crafts purposes. This product is diluted in water and intended for small batch use.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:	Mayco Colors.
	4077 Weaver Court South
	Hilliard, OH 43026
Business Phone:	614-675-1171
Email:	info@maycocolors.com

1.4 Emergency telephone number

Emergency Telephone:

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Contact the local poison control centre.

Section 2 - Hazard(s) Identification

2.1. Classification of the substance or mixture

According to: OSHA Hazard Communication Standard 29 CFR 1910.1200(g) Rev. 2012

Health	Environmental ^a	Physical
H373: Specific Target Organ Toxicity – Repeated Exposure (Category 2)		
H350: Carcinogenicity (Category 1A)	H400: Hazardous to the aquatic	
H371: Specific target organ toxicity (single exposure, Category 2, gastrointestinal tract) H302: Acute toxicity – oral (Category 4)	environment - short term (acute) hazard (Category 1) H410: Hazardous to the aquatic environment - long term (chronic) hazard (Category 1)	Not classified
H332: Acute toxicity – inhalation (Category 4)		

Environmental hazards are outside the scope of OSHA; therefore, product classification for acute and chronic aquatic



toxicity (Category 1) are not mandatory.

2.2. Label elements Label Pictogram:



Signal Word: Danger

Hazard statements & Precautions:

Specific Target Organ Toxicity (Category 2) (H373)	Causes damage to organs through prolonged or repeated exposure. P260: Do not breathe dust. P319: Get medical help if you feel unwell. P501: Dispose of contents/container in accordance with local/regional/national/international regulations
Carcinogenicity (Category 1A) (H350)	 May cause cancer by inhalation. P203: Obtain, read, and follow all safety instructions before use. P280: Wear protective gloves/protective clothing/eye protection/face protection. P318: IF exposed or concerned: Get medical advice. P405: Store locked up. P501: Dispose of contents/container in accordance with local, regional, national, and/or international regulations.
Specific target organ toxicity (single exposure, Category 2, gastrointestinal tract) (H371)	 May cause irritation to gastrointestinal tract through oral exposure. P260: Do not breathe dust. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P308 + P316: IF exposed or concerned: Get emergency medical help immediately. P405: Store locked up. P501: Dispose of contents/container in accordance with local, regional, national, and/or international regulations.



Acute toxicity – oral (Category 4) (H302)	 Harmful if swallowed. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P301+P317: IF SWALLOWED: Get medical help. P330: Rinse mouth P501: Dispose of contents/container in accordance with local, regional, national, and/or international regulations.
Acute toxicity – inhalation (Category 4) (H332)	 Harmful if inhaled. P261: Avoid breathing dust. P271: Use only outdoors or in a well-ventilated area. P304 + P340: IF INHALED: Remove a person to fresh air and keep comfortable for breathing. P317: Get medical help.
Acute aquatic toxicity (Category 1) (H400) Chronic aquatic toxicity (Category 1) (H410)	 Very toxic to aquatic life with long lasting effects. P273: Avoid release to the environment. P391: Collect spillage. P501: Dispose of contents/container in accordance with local, regional, national, and/or international regulation.

Supplemental Hazard Information: None

2.3. Other hazards

• Mechanical irritation of the eyes and respiratory system may occur following exposure dusts.

Section 3 – Composition / Information on Ingredients

3.1 Substances

The product is a mixture and not a substance.

3.2 Mixture

Chemical Name	CAS No.	EC No.	% Concentration ^a	GHS Hazards
Quartz (crystalline silica)	14808-60-7	238-878-4	up to 12.5861%	H350: Carcinogenicity (Category 1) (Inhalation); H372: Specific target organ toxicity (repeated exposure, Category 1, lungs)
Titanium dioxide	13463-67-7	236-675-5	up to 0.4195%	H351: Carcinogenicity (Category 2) (Inhalation)
Cobalt (II, III) oxide	1308-06-1	215-157-2	up to 3.2026%	H334: Respiratory sensitization (Category 1B); H412: Hazardous to the aquatic environment - long term (chronic) hazard (Category 3)
Cupric oxide	1317-38-0	215-269-1	up to 3.1385%	 H371: Specific target organ toxicity (single exposure, Category 2, gastrointestinal tract); H400: Hazardous to the aquatic environment - short term (acute) hazard (Category 1); H410: Hazardous to the aquatic environment - long term (chronic) hazard (Category 1)
Manganese dioxide	1313-13-9	215-202-6	up to 41.9536%	H302: Acute toxicity - oral (Category 4); H332: Acute toxicity - inhalation (Category 4)

The other ingredients in the product are either considered non-hazardous or are below their respective GHS cut-off



values/concentration limits in the final product and were therefore not disclosed in the SDS.

Assessment of this product was based on the assumption that the glaze will not be sanded after it has been fired in the kiln.

Section 4 – First Aid Measures

4.1 Description of first aid measures

Eye contact: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and immediately flush eyes with water. Seek medical attention if in doubt.

Skin contact: No specific first aid measures are required. If irritation occurs, wash with plenty of water and soap. Take off contaminated clothing. If skin irritation persists: Seek medical attention if in doubt.

Inhalation: IF INHALED: Inhaling dust may cause discomfort in the chest, respiratory irritation, shortness of breath and coughing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Ingestion: IF SWALLOWED: Get emergency medical help immediately. Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

• Not required.

Section 5 – Fire Fighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media: Use extinguishing media suitable for surrounding area if material is involved in a fire (e.g., water fog, water spray, foam, dry chemical or carbon dioxide).

Unsuitable Extinguishing Media: None known.

5.2 Special hazards arising from the substance or mixture Hazardous combustion products:

Irritating vapours or fumes may form if product is involved in fire:

Also see Section 10 - Stability and Reactivity.

5.3 Advice for firefighters

• Wear a self-contained breathing apparatus to protect against potentially irritating vapours or fumes.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment (PPE) and emergency procedures

Personal Precautions: Avoid dust formation. Ventilate area if spilled in confined space or other poorly ventilated areas. Observe PPE advice in **Section 8 – Exposure Controls/Personal Protection**.

Emergency Procedures: Evacuate personnel to safe areas.

6.2 Environmental precautions:

 Prevent entry and contact with soil, drains, sewers, and waterways. Inform relevant local/regional/national/international authorities. Prevent further leakage or spillage if it is safe to do so.

6.3 Methods and material for containment and cleaning up



Containment/Clean-up Measures: Contain spill if safe to do so. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Dispose of contents/container in accordance with local/regional/national/international regulations.

6.4 Reference to other sections

• Refer to Section 8 – Exposure Controls/Personal Protection and Section 13 – Disposal Considerations.

Section 7– Handling and Storage

7.1 Precautions for safe handling

- Wash hands thoroughly after handling.
- Wash contaminated clothing before reuse.
- Employees should be trained in the safe use and handling of chemical materials.
- Refer to Section 8 Exposure Controls/Personal Protection

7.2 Conditions for safe storage, including any incompatibilities

- Keep container tightly closed to avoid spills.
- Keep in a cool dry place.

7.3 Specific end use(s)

• Refer to Section 1.2 - Relevant identified uses.

Section 8– Exposure Controls / Personal Protection

8.1 Control Parameters:

Occupational exposure limits: Airborne particles, such as dust, are foreseeable under conditions of normal use.

Chemical Name	CAS No.	ACGIH TLVs TWA	OSHA PELs TWA	NIOSH RELs TWA	DFG MAK TWA
Quartz (crystalline silica)	14808-60-7	0.025 mg/m³ R	0.05 mg/m ³	0.05 mg/m ³	N/A
Titanium dioxide	13463-67-7	10 mg/m ³	15 mg/m ^{3 a}	N/A	0.3 mg/m ^{3 b} R
Cupric oxide	1317-38-0	1 mg/m³ (dusts & mists)	15 mg/m ³ (dusts & mists)	1 mg/m³ (except fume)	N/A
 Total Respirable 			RMeasured asN/ANot applicab	s respirable fraction of the	e aerosol

8.2 Exposure Controls:

Appropriate engineering controls

No special requirements under ordinary conditions of use and with adequate ventilation. Mechanical
ventilation or local exhaust ventilation may be required. In case of dust formation use a respirator with an
approved filter.

8.3 Personal Protective Equipment

Note: Consider the concentration and amount of product at the workplace when selecting PPE. Use protective equipment as required.

- **Respiratory:** Use appropriate respiratory protection when handling to minimize exposure to dust particles. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.
- **Eyes/Face:** If contact is likely, safety glasses with side shields are recommended. An eyewash bottle or station should be available in the workplace. Wear a face shield if splash or spray is likely.



Hands:	Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur, wear chemically protective gloves.
Body/Skin:	Wear chemically impervious gloves, coveralls, apron, boots as necessary to minimize contact. Do not wear rings, watches or similar apparel that could entrap the material.
Thermal Hazards:	None known.
Environmental Exposure Controls:	Not available.
Hygiene measures:	Observe good industrial hygiene practices. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace and should be washed before reuse. When using the
	Section 9 – Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Note: The data below are typical values and do not constitute a specification.

Appearance:			
Physical state:	Dry Powder	Partition Coefficient	
Form:	Powder	n-octanol/water:	Not available
Color:	See section 1.1	Auto-ignition temperature:	Not available
Odor:	Not available		
pH (as supplied):	Not available	Decomposition temperature:	Not available
Freezing point:	Not available	Dynamic viscosity:	Not available
Boiling point:	Not available	Molecular weight:	Not available
Flash point:	Not available	Taste:	Not available
Evaporation rate:	Not available	Explosive properties:	Not available
Flammability:	Not available	Oxidizing properties:	Not available
Upper/lower explosive limits:	Not available	Surface tension:	Not available
Vapor pressure:	Not available	Volatile component:	Not available
Water solubility:	Not available	Gas group:	Not available
Vapor density (Air = 1):	Not available	pH (as solution):	Not available
Specific gravity (Water = 1):	Not available	VOC:	Not available
Relative density:	Not available	Particle size range:	Not available

9.2 Other information

• No data available

Section 10 – Stability and Reactivity

10.1 Reactivity

• This material is not considered to be reactive under normal handling and storage conditions.

10.2 Chemical stability

• This material is considered stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions

• Not expected to occur under normal handling and storage conditions.

10.4 Conditions to avoid



- Exposure to high temperatures
- Strong acids
- Strong bases
- Strong oxidisers

10.5 Incompatible materials

- Strong acids
- Strong bases
- Strong oxidizing agents
- Strong reducing agents

10.6 Hazardous decomposition products

• Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion. Irritating and toxic substances may be emitted upon combustion, burning, or decomposition of dry solids.

Section 11 – Toxicological Information

11.1. Information on hazard classes:

Likely routes of exposure: Skin/eye contact, inhalation of dusts. **Potential signs and symptoms:**

Acute oral toxicity:	Manganese dioxide (CAS No. 1313-13-9) has been classified for acute oral toxicity (Category 4). The oral ATE for the whole product is <2000 mg/kg. Product classification is warranted for acute oral toxicity (Category 4) based on the calculated ATE.
Acute dermal toxicity:	The product is practically non-toxic based on available animal and human use data. The dermal ATE for the whole product is >5000 mg/kg.
Acute inhalation toxicity:	Manganese dioxide (CAS No. 1313-13-9) has been classified for acute inhalation toxicity (Category 4). The inhalation ATE for the whole product is <5 mg/L. Product classification is warranted for acute inhalation toxicity (Category 4) based on the calculated ATE.
Skin corrosion/irritation:	The components in this product >1% are not corrosive to the skin or skin irritants based on human and/or animal studies.
Serious eye damage/irritation:	The components in this product >1% are not damaging to the eyes or eye irritants based on human and/or animal studies. Mechanical irritation may occur if powder gets into the eyes.
Respiratory or skin sensitization:	Cobalt (II, III) oxide (CAS No. 1308-06-1) has been classified for respiratory sensitization (Category 1B). Product classification is not warranted for respiratory sensitization based on a review of the available data and the form of cobalt present in the product (<i>i.e.</i> , cobalt is bound to a matrix/complex which reduces the availability of cobalt in the body). The other components in this product >0.1% are not sensitizing to the skin or respiratory system based on human and/or animal studies.
Mutagenicity:	The components in this product >0.1% are not mutagenic based on animal studies or no data identified for the components in this product.
Carcinogenicity:	Quartz (crystalline silica) (airborne, unbound particles of respirable size) (CAS No. 14808-60-7) has been classified for carcinogenicity (Category 1). Product classification is warranted for carcinogenicity based on the concentration of quartz in the product and the nature of the product (<i>i.e.</i> , powder). Titanium dioxide (airborne, unbound particles of respirable size) (CAS No. 13463-67-7) has been classified for carcinogenicity (Category 2). Product classification is not warranted for carcinogenicity based on the concentration of titanium dioxide in the product. Quartz (crystalline silica) [listed Page 7 of 11



	as silica dust, crystalline, in the form of quartz or cristobalite (CAS No. 14808-60- 7)] is listed as a carcinogen by IARC, NTP and ACGIH. Respirable titanium dioxide (CAS No. 13463-67-7) is listed in Group 2B by IARC. Titanium dioxide is also listed as a carcinogen by ACGIH. The other components in the product >0.1% are not carcinogenic based on animal studies or no data identified for the components in this product.
Reproductive Toxicity:	The components in this product >0.1% are not reproductive toxicants based on animal studies, or no data identified for the components in this product.
Specific target organ toxicity (single exposure):	Cupric oxide (CAS No. 1317-38-0) has been classified for specific target organ toxicity (single exposure, Category 2; may cause irritation to the gastrointestinal tract through oral exposure). Product classification is warranted for this effect given the concentration of cupric oxide in the product and a review of available data. The other components in this product >1% are not single exposure specific target organ toxicity (single exposure) hazards based on animal studies or no data identified for the components in this product
Specific target organ toxicity (repeated exposure):	Quartz (crystalline silica) (CAS No. 14808-60-7) has been classified for specific target organ toxicity (repeated exposure, Category 1; causes damage to lungs through prolonged or repeated exposure <i>via</i> inhalation). Product classification is warranted for specific target organ toxicity (repeated exposure, Category 2; may cause damage to organs through prolonged or repeated exposure) given the concentration of quartz in the product and the nature of the product (<i>i.e.</i> , powder). Extended inhalation at levels above the workplace limit value can cause irreversible damage to the lungs (silicosis). The other components in this product >1% are not repeated exposure specific target organ toxicity hazards based on available information, human and/or animal studies.
Aspiration hazard:	The components of this product >1% are not aspiration hazards based on animal studies or no data identified for the components in this product.

References:

ECHA (European Chemicals Agency). 2023. REACH Registered Substances Database. <u>https://echa.europa.eu/search-for-chemicals</u>

IARC (International Agency for Research on Cancer). 2023. Agents Classified by the IARC Monographs, Volumes 1–129. https://monographs.iarc.who.int/list-of-classifications/

NTP (National Toxicology Program). 2023. Report on Carcinogens, Fifteenth Edition.; Research Triangle Park, NC: Official Journal of the European Union. 2008. Regulation (EC) No 1272/2008. <u>http://data.europa.eu/eli/reg/2008/1272/2022-03-01</u> U.S. Department of Health and Human Services, Public Health Service. <u>https://ntp.niehs.nih.gov/go/roc14</u>

Section 12 – Ecological Information

12.1 Toxicity

 Environmental hazards are outside the scope of OSHA. Based on the criteria outlined in the 9th revision of the GHS, product classification for acute and chronic aquatic toxicity (Category 1) is warranted which results in the Transportation Information provided in Section 14.

Chemical Name	CAS No.	Species	Result
Cobalt (II, III) oxide	1308-06-1	Oncorhynchus mykiss	LC ₅₀ = 0.8 mg Co/L
		Danio rerio	LC ₅₀ = 85 mg Co/L
		Cladoceran	LC ₅₀ = 0.61 mg Co/L
		Lemna minor	EC ₅₀ = 52 μg/L
Cupric oxide	1317-38-0	Fathead minnow	LC ₅₀ (96h): 38.4 μg/L – 256.2 μg/L
		Daphnia magna	NOEC (32d): 188 µg Cu/L
		Raphidocelis subcapitata	NOEC (48h): 1 μg/L - 35 μg/L
		Lemna minor	NOEC (7d): 30 μg/L

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12.2 Persistence and degradability

• No data available for the product.

12.3 Bioaccumulative potential

• Cobalt (II, III) oxide (CAS No. 1308-06-1) has a bioconcentration factor of 180 - 4000.

12.4 Mobility in Soil

• No data available for the product.

12.5 Results of PBT and vPvB assessment

• No data available for the product.

12.6 Endocrine disrupting properties

• No data available for the product.

12.7 Other adverse effects

No further data available.

References:

ECHA (European Chemicals Agency). 2023. REACH Registered Substances Database. <u>https://echa.europa.eu/search-for-chemicals</u>

Section 13 – Disposal Considerations

13.1 Waste treatment methods

Preparing wastes for disposal: Use product for its intended purpose or recycle if possible. Dispose of waste in accordance with local, regional, national, and/or international regulations. The empty container has residues which may exhibit hazards of the product.

Contaminated Packaging: Container packaging may exhibit hazards.

Section 14 – Transport Information

Note: This product is regulated as dangerous goods for transport.

14.1 UN number	3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
14.3 Transport hazard class(es):	9
14.4 Packing group	III
14.5 Environmental hazards	Acute and Chronic
14.6 Special precautions for user	274, 335, 601
14.7 Maritime transport in bulk according to IMO instruments	If the product is transported in bulk, the regulations are applied to the product.

Section 15 – Regulatory Information

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

Note: The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in **Section 3 – Composition / Information on Ingredients**.

<u>United States</u> Federal Regulations:



Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):

No components in this product >0.1% are subject to reporting under CERCLA.

Clean Water Act (CWA): No components in this product are listed as toxic pollutants.

Clean Air Act (CAA): No components in this product are listed under the CAA.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA 302 Components: No components in this product are subject to reporting requirements of S.302.

SARA 304 Emergency Release Notification: None.

SARA 311/312 Hazards: None.

SARA 313 Components: Copper compounds and aluminum oxide (CAS No. 1344-28-1) are subject to reporting requirements of S.313. No other components in this product are subject to reporting requirements of S.313. **Toxic Substances Control Act (TSCA):** Bentonite (CAS No. 1302-78-9) and tridymite (CAS No. 15468-32-3) are not listed on the TSCA. All other components are listed on the non-confidential TSCA inventory or are exempt.

State Regulations:

California: Quartz (crystalline silica) [(listed as silica, crystalline (airborne particles of respirable size)] and titanium dioxide (airborne, unbound particles of respirable size) are listed on the California Proposition 65 List, as chemicals known to the State of California to cause cancer. The product contains respirable particles of <10 µm in size. Therefore, the listed forms of quartz (crystalline silica) and titanium dioxide are relevant for the product. Cobalt is listed on the California Proposition 65 List as a chemical known to the State of California to cause cancer; however, a screening assessment indicates that the concentration of cobalt in the product is not expected to be a cause for concern and require warnings for the purpose of California Proposition 65. No other components in this product are listed. No other components in this product are listed.

International:

IARC: Quartz (crystalline silica) (CAS No. 14808-60-7) is listed in Group 1, carcinogenic to humans. Titanium dioxide (CAS No. 13463-67-7) is listed in Group 2B, possibly carcinogenic to humans. Cobalt oxide (CAS No. 1308-06-1) (listed as cobalt (II, III) oxide), is classified as Group 3, not classifiable as to its carcinogenicity to humans. No other components of this product are classified with respect to carcinogenicity.

15.2 Chemical Safety Assessment

• None available for the components in this product.

Section 16 – Other Information

ACMI Seal

The product, DRY STONEWARE GLAZES [ANTIQUE BRASS (SD182)], must be properly labeled for known health risk [*i.e.*, acute oral and inhalation toxicity and gastrointestinal irritation as a result of acute oral exposure] and should reflect the ACMI CL Seal.



List of acronyms and abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists	NTP: National Toxicology Program
ATE: Acute Toxicity Estimate	OSHA: Occupational Safety and Health Administration
CAA: Clean Air Act	PBT: Persistent, Bioaccumulative and Toxic
CAS: Chemical Abstract Service Number	PEL: Permissible Exposure Level
CERCLA: Comprehensive Environmental Response and Liability Act	PPE: Personal Protective Equipment



CWA: Clean Water Act	REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
DFG MAK: Deutsche Forschungsgemeinschaf Maximale Arbeitsplatzkonzentration	REL: Recommended exposure level
EC: European Commission	SARA: Superfund Amendment and Reauthorization Act
ECHA: European Chemicals Agency	SDS: Safety Data Sheet
GHS: Global Harmonized System	TLV: Threshold limit value
IARC: International Agency for Research on Cancer	TSCA: Toxic Substances Control Act
IMO: International Maritime Organization	TWA: Time-weighted average
MARPOL: Maritime Pollution	UN: United Nations
N/A: Not applicable	VOC: Volatile Organic Compound
NIOSH: National Institute for Occupational Safety & Health	vPvB: very Persistent, very Bioaccumulative

References:

ECHA (European Chemicals Agency). 2023. REACH Registered Substances Database. https://echa.europa.eu/search-for-chemicals

IARC (International Agency for Research on Cancer). 2023. Agents Classified by the IARC Monographs, Volumes 1-129. <u>https://monographs.iarc.who.int/list-of-classifications/</u>

NTP (National Toxicology Program). 2023. Report on Carcinogens, Fifteenth Edition.; Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. <u>https://ntp.niehs.nih.gov/go/roc14</u>

Disclaimer:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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