



# JUNGLE GEMS GLAZES

## SAFETY DATA SHEET (SDS)

Version: 01

Date of Issue: June 26, 2024

According to: Regulation (EC) No. 1272/2008

Regulation (EC) No. 1907/2006

### Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifier

Product Name: JUNGLE GEMS GLAZES

Product Colors: MARDI GRAS (CG1000), GOGH IRIS (CG1001), DAY LILY (CG1002), PEACH PARTY (CG1003), BERRY TART (CG1004), MAROON LAGOON (CG1005), PURPLE REIGN (CG1006), BLUEBERRY BUBBLEGUM (CG1007), BLUE GUPPY (CG1008), CHERRY LIMEADE (CG1009), BLUE CAPRICE (CG718), SEAWIND (CG722), NOEL (CG750), SASSY ORANGE (CG753), FIRECRACKER (CG756), BLACK OPAL (CG779), MYSTIC JADE (CG780), STRAWBERRY SUNDAE (CG783), ROYAL FANTASY (CG785), OBSIDIAN (CG786), DUTCH ENAMELWARE (CG788), YADRO PRINT (CG795), BLACK IRIS (CG798), WILDFIRE (CG954), LAGOON BLUE (CG958), LEMON LIME (CG963), KALEIDOSCOPE (CG964), MOCHA MARBLE (CG965), PEPPERMINT TWIST (CG968), FLORAL FANTASY (CG969), MASQUERADE (CG970), DRAGON'S BREATH (CG972), BLOOMIN' BLUE (CG974), INK SPOTS (CG977), CORAL PUFF (CG980), FRUITY FRECKLES (CG981), KOI POND (CG983), LADYBUG (CG984), MONET'S POND (CG985), SMOKE AND FIRE (CG986), TREE FROG (CG987), STARRY NIGHT (CG990), MOUNTAIN MOSS (CG991), LAVENDER SPRIGS (CG993), FIELD AND FLOWERS (CG994), SEAFOAM (CG997), PINK PIXIE (CG998), JAZZ NOTES (CG999), PEACOCK EYES (S2701), NORTHERN LIGHTS (S2702), BERRYBERRY PIE (S2703), PLUM JELLY (S2704), ORIENTAL CARMEL (S2708), CAPPUCINO MINT (S2709), TAHITI GRAPE (S2711), MONSOON SEAS (S2712), HERB GARDEN (S2714), SPOTTED KIWI (S2715), CELESTIAL BLUE (S2716), COSMIC BLACK (S2718), GRAPE DIVINE (S2723), LOTUS BLOSSOM (S2724), SAFARI (S2725), CHEETAH (S2726), POPPY FIELDS (S2727), CITRUS SPLASH (S2729), KABOOM (S2731)

Product sizes: 4 fl. oz. (118 ml), 16 fl. oz. (473 mL)

Other Means of Identification:

Unique Formula Identifier: See product label

Other: None known

Product Description: Coloured liquid glaze formulations intended to be applied using a brush and then placed in a kiln for glaze firing.

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

Relevant identified use(s): The product is intended for general (adults) arts and crafts purposes.

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Mayco Colors  
4077 Weaver Court South  
Hilliard, OH 43026

EU Contact:  
Business Phone: 614-675-1171  
Email: info@maycocolors.com

#### 1.4 Emergency telephone number

Emergency Telephone: Contact the local poison control centre.

## Section 2 – Hazard(s) Identification

### 2.1. Classification of the substance or mixture

According to: Regulation (EC) No 1272/2008 [CLP]

	Physical	Health	Environment <sup>a</sup>
Classification according to Regulation (EC) No 1272/2008 [CLP]	Not classified	Not classified	H412: Chronic aquatic toxicity (Category 3)
SCL and/or M-factor	Not applicable	Not applicable	Not applicable
Classification Procedure	Weight of evidence	Weight of evidence	Weight of evidence

<sup>a</sup> This SDS applies to the product line, as such the environmental classifications listed do not pertain to all colors. It should be noted that some colors may present environmental concerns to a lesser degree (*i.e.*, Category 4).

### 2.2. Label elements

**Label Pictogram:** None required

**Signal Word:** None required

**Hazard statements & Precautions:**

**Chronic aquatic toxicity (Category 3) (H412)**

**Harmful to aquatic life with long lasting effects.**

**P273:** Avoid release to the environment.

**P501:** Dispose of contents/container in accordance with local, regional, national, and/or international regulation.

**Supplemental Hazard Information:**

- EUH208: Contains 1,2-benzisothiazolin-3-one (CAS No. 2634-33-5). May produce an allergic reaction.

### 2.3. Other hazards

- This product is not expected to be endocrine disrupting.
- This product is not expected to meet the criteria for vPvB or PBT in accordance with Regulation (EC) No. 1907/2006, Annex XIII.
- No other hazards have been identified for this product.

## 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 <sup>a, b</sup>	GHS Hazards <sup>c</sup>
Zinc oxide	1314-13-2	215-222-5	≤ 2.5237%	H371: Specific target organ toxicity (single exposure, Category 2, gastrointestinal tract irritation); H400: Acute aquatic toxicity (Category 1); H410: Chronic aquatic toxicity (Category 1)
Zinc pyrrithione	13463-41-7	236-671-3	≤ 0.0067%	H301: Acute oral toxicity (Category 3); H318: Eye damage (Category 1); H330: Acute inhalation toxicity (Category 2); H372: Specific target organ toxicity (repeated exposure, Category 1); H360D: Reproductive toxicity (Category 1B) (May damage the unborn child) H400: Acute aquatic toxicity (Category 1); H410: Chronic aquatic toxicity (Category 1)

Crystalline silica	14808-60-7	238-878-4	≤ 7.9964%	H350: Carcinogenicity (Category 1A) (inhalation); H372: Specific target organ toxicity (repeated exposure, Category 1 - lungs)
Titanium dioxide	13463-67-7	236-675-5	≤ 0.8801%	H351: Carcinogenicity (Category 2) (inhalation)
Cobalt (II, III) oxide	1308-06-1	215-157-2	≤ 2.5214%	H334: Respiratory sensitization (Category 1B); H412: Chronic aquatic toxicity (Category 3)
Sodium carbonate	497-19-8	207-838-8	≤ 7.5808%	H319: Eye irritation (Category 2)
Boron oxide <sup>d</sup>	1303-86-2	215-125-8	≤ 1.8355%	H360FD: Reproductive toxicity (Category 1B) (May damage fertility and the unborn child)
Nickel oxide	1313-99-1	215-215-7	≤ 0.1681%	H317: Skin sensitization (Category 1); H372: Specific target organ toxicity (repeated exposure, Category 1 - lungs); H350: Carcinogenicity (Category 1A) (inhalation); H413: Chronic aquatic toxicity (Category 4)

- <sup>a</sup> Concentrations are calculated as a maximum across all colors, rather than by color.
- <sup>b</sup> Concentrations listed are a sum of the concentration of the chemical in liquid and crystal form. The hazards corresponding to each chemical may not apply to the crystal form of the chemical as it is not bioavailable.
- <sup>c</sup> GHS classifications are based on classifications in the CLP as well as available toxicology data regarding the individual ingredients.
- <sup>d</sup> The boron oxide listed as part of this product is completely incorporated into the glassy structure of the frit, chemically reacted in the form of silicates or other essentially insoluble complexes. Exposure to the hazardous ingredient can occur if the ingredients dissolve out of the glass. Because of the chemical stability of frits and its resistance to attack by acids or alkali, this is anticipated to occur very slowly. To date, there is no significant evidence of adverse effects from industrial exposures.

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.

The product may contain titanium dioxide (CAS No. 13463-67-7) and crystalline silica (CAS No. 14808-60-7) which may be hazardous when inhaled. Given the nature and physical form of the product (*i.e.*, liquid glaze), airborne respirable particles would not likely be released from the product and therefore the hazard is not relevant to the product. It was assumed that the glaze will not be sanded after it has been fired in the kiln.

	Specific Concentration Limit	Multiplying-Factor	Acute Toxicity Estimate
<b>JUNGLE GEMS GLAZES</b>	N/A	N/A	>2000 mg/kg (oral/dermal) >20 mg/L (Inhalation)

## 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:** No specific first aid measures are required. Inhalation route of exposure is not anticipated with intended use. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Seek medical attention if in doubt.

**Ingestion:** No specific first aid measures are required. Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if in doubt.

#### 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:
- See also **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:** Ventilate area if spilled in confined space or other poorly ventilated areas. Observe PPE advice in **Section 8 – Exposure Controls/Personal Protection**.

**Emergency Procedures:** No specific precautions required. Keep unauthorized personnel away.

#### 6.2 Environmental precautions

- Prevent entry and contact with soil, drains, sewers, and waterways. Collect spillage. 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. Collect recoverable product and place in a designated container for recycle and/or disposal. Ventilate contaminated area thoroughly. 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:** Only vapours were considered to be foreseeable under conditions of normal use. Airborne particles, such as dust, are not foreseeable under conditions of normal use.

Chemical Name	CAS No.	ACGIH TLV TWA	OSHA PEL TWA	NIOSH REL TWA	DFG MAK TWA
Zinc oxide, dust & fume	1314-13-2	2 mg/m <sup>3</sup> <sup>a</sup>	5mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup> <b>R</b>
Silica, crystalline, mixed respirable (quartz, cristobalite, tridymite)	14808-60-7	0.025 mg/m <sup>3</sup> <sup>a</sup>	0.05 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	N/A
Titanium dioxide	13463-67-7	10 mg/m <sup>3</sup> <sup>a</sup>	15 mg/m <sup>3</sup> <sup>b</sup>	N/A	0.3 mg/m <sup>3</sup> <b>R</b> <sup>c</sup>
Boron oxide	1303-86-2	N/A	15 mg/m <sup>3</sup> <sup>b</sup>	10 mg/m <sup>3</sup>	N/A
N/A – Not applicable			<sup>a</sup> Respirable particulate matter		
R – Measured as respirable fractions of the aerosol			<sup>b</sup> Total dust		
			<sup>c</sup> Multiplied with the material density		

**Note:** Titanium dioxide (CAS No. 13463-67-7) values listed above are related to non-ultrafine and non-nanoscale or finescale particles.

### 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.

### 8.3 Personal Protective Equipment

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

<b>Respiratory:</b>	Under normal conditions of use, a respirator is not usually required. Use appropriate respiratory protection when handling to minimize exposure to vapours. 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.
<b>Eyes/Face:</b>	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.
<b>Hands:</b>	Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur, wear chemically protective gloves.
<b>Body/Skin:</b>	Gloves, coveralls, apron, boots as necessary to minimize contact. Do not wear rings, watches or similar apparel that could entrap the material.
<b>Thermal Hazards:</b>	None known
<b>Environmental Exposure Controls:</b>	Not available
<b>Hygiene measures:</b>	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 product do not eat, drink or smoke.

## 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.

<b>Appearance:</b> Physical state: Color: Odor:	Liquid See section 1.1 None	<b>Partition Coefficient n-octanol/water:</b> <b>Auto-ignition temperature:</b>	Not available Not available
<b>pH (as supplied):</b>	8.0 – 9.0	<b>Decomposition temperature:</b>	Not available
<b>Freezing point:</b>	32°F	<b>Dynamic viscosity:</b>	Not available
<b>Boiling point:</b>	212°F	<b>Molecular weight:</b>	Not available
<b>Flash point:</b>	Not available	<b>Taste:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Explosive properties:</b>	Not available
<b>Flammability:</b>	Not available	<b>Oxidizing properties:</b>	Not available
<b>Upper/lower explosive limits:</b>	Not available	<b>Surface tension:</b>	Not available
<b>Vapor pressure:</b>	Not available	<b>Volatile component:</b>	Not available
<b>Water solubility:</b>	Not available	<b>Gas group:</b>	Not available
<b>Vapor density (Air = 1):</b>	Not available	<b>pH (as solution):</b>	Not available
<b>Specific gravity (Water = 1):</b>	Not available	<b>VOC:</b>	Not available
<b>Relative density:</b>	Not available	<b>Particle size range:</b>	Not available

### 9.2.1 Information with Regard to Physical Hazard Classes

<b>Explosives</b>	Not available
<b>Flammable gases</b>	Not available
<b>Aerosols</b>	Not available
<b>Oxidising gases</b>	Not available
<b>Gases under pressure</b>	Not available
<b>Flammable liquids</b>	Not available
<b>Flammable solids</b>	Not available
<b>Self-reactive substances and mixtures</b>	Not available
<b>Pyrophoric liquids</b>	Not available
<b>Pyrophoric solids</b>	Not available
<b>Self-heating substances and mixtures</b>	Not available
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Not available
<b>Oxidising liquids</b>	Not available
<b>Oxidizing solids</b>	Not available
<b>Organic peroxides</b>	Not available
<b>Corrosive to metals</b>	Not available
<b>Desensitised explosives</b>	Not available

### 9.2.2 Other Safety Characteristics

<b>Mechanical sensitivity</b>	Not available
<b>Self-accelerating polymerisation temperature</b>	Not available
<b>Formation of explosible dust/air mixtures</b>	Not available
<b>Acid/alkaline reserve; (e) evaporation rate</b>	Not available
<b>Miscibility</b>	Not available
<b>Conductivity</b>	Not available
<b>Corrosiveness</b>	Not available
<b>Gas group</b>	Not available
<b>Redox potential</b>	Not available
<b>Radical formation potential</b>	Not available
<b>Photocatalytic properties</b>	Not 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 reducing agents
- Strong oxidizing 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 vapors.

**Potential signs and symptoms:**

<b>Acute oral toxicity:</b>	Zinc pyrithione (CAS No. 13463-41-7) has been classified for acute oral toxicity (Category 3). Product classification is not warranted based on the concentration of the hazardous ingredients in the product and given that the product ATE is >2000 mg/kg.
<b>Acute dermal toxicity:</b>	The product is practically non-toxic based on human and/or animal studies. The dermal ATE for the whole product is >2000 mg/kg.
<b>Acute inhalation toxicity:</b>	Zinc pyrithione (CAS No. 13463-41-7) has been classified for acute inhalation toxicity (Category 2). Product classification is not warranted based on the concentration of zinc pyrithione in the product and given that the product ATE is >20 mg/L (vapours).
<b>Skin corrosion/irritation:</b>	The ingredients >1% in the product are not skin irritants based on human and/or animal studies.
<b>Serious eye damage/irritation:</b>	Zinc pyrithione (CAS No. 13463-41-7) has been classified for eye damage (Category 1) and sodium carbonate (CAS No.497-19-8) has been classified for eye irritation (Category 2). Product classification is not warranted based on the concentration of the hazardous ingredients and a review of available data. The other ingredients >1% in the product are not eye irritants based on human and/or animal studies.

<b>Respiratory or skin sensitization:</b>	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). Nickel oxide (CAS No. 1313-99-1) has been classified for skin sensitization (Category 1). Product classification is not warranted for skin sensitization given a review of available data. The other ingredients >0.1% in the product are not sensitizing to the skin based on human and/or animal studies.
<b>Mutagenicity:</b>	The ingredients >0.1% in the product are not mutagenic based on human and/or animal studies.
<b>Carcinogenicity:</b>	Crystalline silica (airborne, unbound particles of respirable size) (CAS No. 14808-60-7) has been classified for carcinogenicity (Category 1). Titanium dioxide (CAS No. 13463-67-7) (airborne, unbound particles of respirable size) has been classified for carcinogenicity (Category 2). Nickel oxide (CAS No. 1313-99-1) has been classified for carcinogenicity (Category 1A). Crystalline silica (listed as silica dust, crystalline, in the form of quartz or cristobalite) is listed as a Group 1 carcinogen by IARC. Titanium dioxide is listed as a Group 2B carcinogen by IARC. Nickel oxide (listed as nickel compounds) is listed as a Group 1 carcinogen by IARC. Crystalline silica [listed as silica, crystalline (respirable size) / silica, crystalline — $\alpha$ -quartz and cristobalite], titanium dioxide, and nickel oxide (listed as nickel compounds and metallic nickel / nickel and inorganic compounds, including nickel subsulfide) are also listed as carcinogens by NTP and ACGIH. Product classification is not warranted for carcinogenicity based on a review of available data and the nature/physical form of the product ( <i>i.e.</i> , liquid glaze). It was assumed that the glaze will not be sanded after it has been fired in the kiln. The other ingredients >0.1% in the product are not carcinogenic based on animal studies or no data identified for the components in this product.
<b>Reproductive Toxicity:</b>	Zinc pyrithione (CAS No. 13463-41-7) has been classified for reproductive toxicity (Category 1B; May damage the unborn child). Product classification is not warranted for this effect given the concentration of zinc pyrithione in the product. Boron oxide (CAS No. 1303-86-2) has been classified for reproductive toxicity (Category 1B; May damage fertility and the unborn child). Product classification is not warranted given that the boron oxide is completely incorporated into the glassy structure of the frit (chemically reacted in the form of silicates or other essentially insoluble complexes). The other ingredients >0.1% in the product are not reproductive toxicants based on human and/or animal studies.
<b>Specific target organ toxicity (single exposure):</b>	Zinc oxide (CAS No. 1314-13-2) 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 not warranted for gastrointestinal irritation given the concentration of zinc oxide in the product. The other ingredients >1% in the product are not specific target organ toxicity (single exposure) toxicants based on human and/or animal studies.
<b>Specific target organ toxicity (repeated exposure):</b>	Crystalline silica (CAS No. 14808-60-7) and nickel oxide (CAS No. 1313-99-1) have been classified for specific target organ toxicity (repeated exposure, Category 1; causes damage to the lungs through prolonged or repeated exposure). Product classification is not warranted for specific target organ toxicity based on a review of available data and the nature/physical form of the product ( <i>i.e.</i> , liquid glaze). It was assumed that the glaze will not be sanded after it has been fired in the kiln. Zinc pyrithione (CAS No. 13463-41-7) has been classified for specific target organ toxicity (repeated exposure, Category 1; causes damage to the organs through prolonged or repeated exposure). Product classification is not warranted for specific target organ toxicity given the concentration of zinc pyrithione in the product. The other ingredients >1% in the product are not specific target organ toxicity (repeated exposure) toxicants based on human and/or animal studies.



**Aspiration hazard:**

The ingredients >1% in the product are not aspiration hazards based on human and/or animal studies.

**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties**

- This product is not expected to be endocrine disrupting,

**11.2.2 Information on other hazards**

- No other hazards to note.

**References:**

ECHA (European Chemicals Agency). 2024. REACH Registered Substances Database.

<https://echa.europa.eu/search-for-chemicals>

IARC (International Agency for Research on Cancer). 2024. Agents Classified by the IARC Monographs, Volumes 1–129.

<https://monographs.iarc.who.int/list-of-classifications/>

NTP (National Toxicology Program). 2021. Report on Carcinogens, Fifteenth Edition.; Research Triangle Park, NC:

U.S. Department of Health and Human Services, Public Health Service. <https://ntp.niehs.nih.gov/go/roc15>

Official Journal of the European Union. 2008. Regulation (EC) No 1272/2008.

<http://data.europa.eu/eli/reg/2008/1272/2022-03-01>

**Section 12 – Ecological Information****12.1 Toxicity**

- Aquatic acute toxicity (Category 2 and 3) are outside the scope of Regulation (EC) No 1272/2008 [CLP]. Based on the criteria outlined in the 10<sup>th</sup> revision of the GHS, the product is classified for acute and chronic aquatic toxicity (Category 3).

Chemical Name <sup>a</sup>	CAS No.	Species	Value
Zinc oxide	1314-13-2	<i>Danio rerio</i>	LC <sub>50</sub> (96h): 1.55 mg/L (bulk ZnO) nominal EC <sub>50</sub> (84h): 2.066 mg/L (bulk ZnO) nominal
		<i>Daphnia magna</i>	EC <sub>50</sub> (48h): > 5 - < 16.2 mg/L (bulk ZnO) nominal
		<i>Daphnia magna</i>	EC <sub>50</sub> (48h): >1.4 - <2.5 mg/L nominal
		Freshwater Alga and Cyanobacteria	EC <sub>10</sub> (72h): 0.42 mg/L nominal
Zinc pyrithione <sup>b</sup>	13463-41-7	<i>Pimephales promelas</i>	LC <sub>50</sub> (96h): 0.0026 mg/L NOEC (96h): 0.0011 mg/L
		<i>Daphnia magna</i>	LC <sub>50</sub> (48h): 0.0082 mg/L NOEC (48h): 0.0011 mg/L
		<i>Selenastrum capricornutum</i>	EC <sub>50</sub> (120h): 0.028mg/L NOEC (120h): 0.0078 mg/L
Cobalt (II, III) oxide	1308-06-1	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub> : 0.8 mg Co/L
		<i>Danio rerio</i>	LC <sub>50</sub> : 85 mg Co/L
		<i>Cladoceran</i>	LC <sub>50</sub> : 0.61 mg Co/L
		<i>Lemna minor</i>	EC <sub>50</sub> : 52 µg/L
Nickel oxide	1313-99-1	<i>Pimephales promelas</i>	LC <sub>50</sub> (96h): 0.4 mg Ni/L
		<i>Brachydanio rerio</i>	LC <sub>50</sub> (96h): 320 mg Ni/L
		<i>Ceriodaphnia dubia</i>	LC <sub>50</sub> (48h): 0.013 mg Ni/L
		<i>Daphnia magna</i>	LC <sub>50</sub> (48h): 4970 mg Ni/
		Chlamydomonas species	NOEC/EC <sub>10</sub> : 12.3 µg/L
		Anacystis nidulans	NOEC/EC <sub>10</sub> : 425 µg/L

<sup>a</sup> The aquatic hazards corresponding to each chemical may not apply to the crystal form of the chemical as it is not bioavailable.

<sup>b</sup> According to Regulation (EC) No. 1272/2008 (CLP), M=1000 for acute aquatic effects and M=10 for chronic aquatic effects.

## 12.2 Persistence and degradability

- Zinc pyrithione (CAS No. 13463-41-7) is not persistent and rapidly degrades in water and the anaerobic sediment layer.
- No data available for the other ingredients in the product.

## 12.3 Bioaccumulative potential

- Zinc pyrithione (CAS No. 13463-41-7) is unlikely to bioaccumulate in aquatic species, either directly or through the food chain. The estimated log  $K_{ow}$  is 0.99.
- Cobalt does not biomagnify, but rather exhibits biodilution, particularly in upper levels of both aquatic and terrestrial food chains. Cobalt (II, III) oxide (CAS No. 1308-06-1) has a bioconcentration factor of 180 – 4000.
- No data available for the other ingredients in the product.

## 12.4 Mobility in Soil

- Zinc oxide (CAS No. 1314-13-2) has a mean  $K_d$  of 3.3 L/kg (mean of all five soils for bulk ZnO).
- Zinc pyrithione (CAS No. 13463-41-7) is slightly ( $K_{oc}=784$ ) or very slightly ( $K_d=2347$ ) mobile in soils and very slightly mobile ( $K_{oc}=3597-10633$ ) in sediments.
- Nickel oxide (CAS No. 1313-99-1) has a log  $K_p$  (soil) of 2.86.
- No data available for the other ingredients in the product.

## 12.5 Results of PBT and vPvB assessment

- The ingredients in this product are not considered PBT or vPvB.

## 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). 2024. REACH Registered Substances Database.  
<https://echa.europa.eu/search-for-chemicals>

## 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 not regulated as dangerous goods for transport.

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es):	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

## 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**.

#### European Union

**Seveso Directive (2012/18/EU):** Methanol (CAS No. 67-56-1) is listed in Annex I, Part 2 as a named dangerous substance with a lower tier requirement of 500 tonnes and an upper tier requirement of 5000 tonnes. 2,3,7,8 TCDD (CAS No. 1746-01-6) is listed in Annex I, Part 2 as a named dangerous substance with an upper tier requirement of 0.001 tonnes. No other ingredients in this product are listed.

**Regulation (EC) No. 1005/2009, Annex I and II:** The other ingredients in this product are not listed.

**Regulation (EC) No. 649/2012, Annex I, Parts I-III:** Cadmium (listed as cadmium and its compounds) is listed in Annex I, Part 1 as a chemical subject to export notification procedure. The ingredients in this product are not listed.

**Regulation (EC) No. 2019/1021, Annex I:** The ingredients in this product are not listed.

#### Germany:

**Wassergefährdungsklasse (water hazard class):** WGK 2 – Deutlich wassergefährdend (hazard to waters).

#### International:

**IARC:** Crystalline silica (CAS No. 14808-60-7) (listed as silica dust, crystalline, in the form of quartz or cristobalite), 2,3,7,8 TCDD (CAS No. 1746-01-6) (listed as 2,3,7,8-Tetrachlorodibenzo-para-dioxin), arsenic (listed as arsenic and inorganic arsenic compounds), cadmium (listed as cadmium and cadmium compounds), chromium [listed as chromium (VI) compounds], and nickel compounds are listed as Group 1, carcinogenic to humans. Cobalt is listed as Group 2A, probably carcinogenic to humans. Titanium dioxide (CAS No. 13463-67-7) and lead are listed as Group 2B, possibly carcinogenic to humans. Red iron oxide (CAS No. 1309-37-1) (listed as ferric oxide), cobalt (II,III) oxide (CAS No. 1308-06-1), silicon dioxide (CAS No. 7631-86-9) (listed as silica, amorphous), chromium (listed as chromium (III) compounds), and mercury (listed as mercury and inorganic mercury compounds) are listed as Group 3, unclassifiable as to carcinogenicity in humans. No other ingredients in 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

### 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 Forschungsgemeinschaft 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). 2024. REACH Registered Substances Database.

<https://echa.europa.eu/search-for-chemicals>

IARC (International Agency for Research on Cancer). 2024. Agents Classified by the IARC Monographs, Volumes 1-129. <https://monographs.iarc.who.int/list-of-classifications/>

NTP (National Toxicology Program). 2021. Report on Carcinogens, Fifteenth Edition.; Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. <https://ntp.niehs.nih.gov/go/roc15>

Official Journal of the European Union. 2008. Regulation (EC) No 1272/2008.

<http://data.europa.eu/eli/reg/2008/1272/2022-03-01>

**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.

**Revision Indicator:** This is a new Safety Data Sheet.

**Creation Date:** June 26, 2024