

**Safety Data Sheet**

according to UK REACH Regulation

**Gold electrolyte Chamaeleon**

Revision date: 02.12.2022

Product code: 0101

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**

Gold electrolyte Chamaeleon

UFI: CGQ0-X9VW-E004-F50Q

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
**Use of the substance/mixture**

Galvanic gold-plating

**Uses advised against**

Not suitable for direct application on aluminium, titanium, zinc, tungsten, stainless steel.

**1.3. Details of the supplier of the safety data sheet**

Company name: MARAWE GmbH & Co. KG  
 Street: Donaustauer Str. 378 - Gebäude 64  
 Place: D-93055 Regensburg  
 Telephone: +49 941 / 29020439      Telefax: +49 941 / 29020593  
 e-mail: info@marawe.de  
 Contact person: Product safety department  
 Internet: www.marawe.de

**1.4. Emergency telephone**
**number:** +49 941 / 29020439,  
 Mo-Do 9:00 - 16:00 Uhr; Fr 9:00 - 14:00 Uhr

**SECTION 2: Hazards identification**
**2.1. Classification of the substance or mixture**
**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**
**GB CLP Regulation**
**Special labelling of certain mixtures**

EUH032      Contact with acids liberates very toxic gas.  
 EUH208      Contains potassium dicyanoaurate. May produce an allergic reaction.

**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**
**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
13967-50-5	potassium dicyanoaurate			< 1 %
			01-2120130777-52	
	Met. Corr. 1, Acute Tox. 2, Acute Tox. 2, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H290 H330 H300 H315 H318 H317 H373 H400 H410 EUH032			

Full text of H and EUH statements: see section 16.

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**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
13967-50-5		potassium dicyanoaurate	< 1 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 29,2 mg/kg	

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

This product contains a gold cyanide complex. Absolutely avoid contact with strong acids, as this can release the highly toxic hydrocyanic acid.

**After inhalation**

Provide fresh air.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If irritation symptoms persist, consult a doctor.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Consult emergency doctor immediately. Point out the cyanide.

**4.2. Most important symptoms and effects, both acute and delayed**

May cause skin irritation.

Symptoms of acute cyanide poisoning: shortage of breath. Headache. unconsciousness. Cardiac arrhythmias. Cyanosis (blue coloured blood).

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

The substance contains cyanide. 4-Dimethylaminophenole or thiosulfate can be used as antidot.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Non-flammable. Hydrocyanic acid can be released.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Use personal protection equipment. Take off contaminated clothing and wash it before reuse.

**6.2. Environmental precautions**

No special environmental measures are necessary. Clean contaminated articles and floor according to the

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environmental legislation.

#### **6.3. Methods and material for containment and cleaning up**

##### **For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

No special measures are necessary.

#### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.

#### **Advice on general occupational hygiene**

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage rooms and vessels**

Keep container tightly closed.

#### **Hints on joint storage**

No special measures are necessary.

### **7.3. Specific end use(s)**

Galvanic gold-plating

## SECTION 8: Exposure controls/personal protection

### **8.1. Control parameters**

#### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Cyanides, except HCN, NaCN, KCN, cyanogen & cyanogen chloride (as CN)	-	5		TWA (8 h)	WEL

#### **DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
13967-50-5	potassium dicyanoaurate			
Worker DNEL, long-term		inhalation	systemic	0,071 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	0,1 mg/kg bw/day

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#### PNEC values

CAS No	Substance	
	Environmental compartment	Value
13967-50-5	potassium dicyanoaurate	
	Freshwater	0,0002 mg/l
	Marine water	0,00002 mg/l
	Freshwater sediment	0,33 mg/kg
	Marine sediment	0,033 mg/kg
	Micro-organisms in sewage treatment plants (STP)	6 mg/l
	Soil	0,067 mg/kg

#### 8.2. Exposure controls



#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### Skin protection

Wear suitable protective clothing.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	light yellow
Odour:	odourless

#### Changes in the physical state

Melting point/freezing point:	< 0 °C
Boiling point or initial boiling point and boiling range:	> 100 °C
Flash point:	not determined

#### Flammability

Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

#### Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

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pH-Value:	7 - 8
Water solubility:	easily soluble
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	not determined
Relative vapour density:	not determined

**9.2. Other information**
**Information with regard to physical hazard classes**

 Oxidizing properties  
 Not oxidising.

**Other safety characteristics**

 Solid content: not determined  
 Evaporation rate: not determined

**Further Information**
**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Can release hydrogen cyanide in case of strong acidification.

**10.4. Conditions to avoid**

Acid, concentrated

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

Hydrogen cyanide (hydrocyanic acid)

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in GB CLP Regulation**
**Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13967-50-5	potassium dicyanoaurate				
	oral	LD50 mg/kg 29,2	Rat	Pre-supplier/manufact urer	OECD 401
	dermal	LD50 mg/kg > 5000	Rat	Pre-supplier/manufact urer	OECD 402
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			

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#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

#### Sensitising effects

Contains potassium dicyanoaurate. May produce an allergic reaction.

#### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Additional information on tests

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
13967-50-5	potassium dicyanoaurate					
	Acute fish toxicity	LC50 5,7 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Pre-supplier/manu facturer	OECD 203
	Acute algae toxicity	ErC50 30 mg/l		Pseudokirchneriella subcapitata	Pre-supplier/manu facturer	OECD 201
	Acute crustacea toxicity	EC50 0,2 mg/l	48 h	Daphnia magna (Big water flea)	Pre-supplier/manu facturer	OECD 202
	Acute bacteria toxicity	(EC50 406 mg/l)	3 h	Activated sludge	Pre-supplier/manu facturer	OECD 209

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. Other adverse effects

No information available.

#### Further information

Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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**Disposal recommendations**

Dispose of waste according to applicable legislation.

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b><u>14.1. UN number or ID number:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.2. UN proper shipping name:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.3. Transport hazard class(es):</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.4. Packing group:</u></b>	No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

<b><u>14.1. UN number or ID number:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.2. UN proper shipping name:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.3. Transport hazard class(es):</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.4. Packing group:</u></b>	No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

<b><u>14.1. UN number or ID number:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.2. UN proper shipping name:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.3. Transport hazard class(es):</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.4. Packing group:</u></b>	No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

<b><u>14.1. UN number or ID number:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.2. UN proper shipping name:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.3. Transport hazard class(es):</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.4. Packing group:</u></b>	No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No information available.

**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****National regulatory information**

Water hazard class (D): - - non-hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.
EUH208	Contains potassium dicyanoaurate. May produce an allergic reaction.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*