

## SURFACE MARKER

11294-0013

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

SURFACE MARKER

Article number:

SURFACE MARKER / SET 319-0005 / 319-0000

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

##### Use of the substance/mixture

Metal pigment for surface marking

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

Company name: YETI Dentalprodukte GmbH

Street: Industriestrasse 3

Place: D-78234 Engen

Telephone: +49 7733-9410-0

Telefax: +49 7733-9410-22

Responsible Department: sdb@yeti-dental.com

Responsible for the safety data sheet: sds@gbk-ingelheim.de

#### 1.4. Emergency telephone

+49 7733-9410-0 (Mo-Do 8:00 - 16:30, Fr 8:00 - 15:00)

number:

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 1B

Reproductive toxicity: Repr. 1B

Hazardous to the aquatic environment: Aquatic Chronic 4

Hazard Statements:

Harmful if swallowed.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer by inhalation.

May damage fertility. May damage the unborn child.

May cause long lasting harmful effects to aquatic life.

#### 2.2. Label elements

##### Regulation (EC) No. 1272/2008

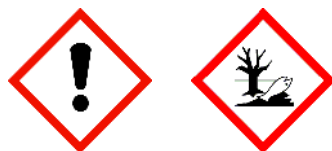
##### Hazard components for labelling

Brass powder of copper/zinc alloy

Signal word:

Warning

Pictograms:



##### Hazard statements

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

##### Precautionary statements

P264 Wash hands and face thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

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P391	Collect spillage.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

### Additional advice on labelling

The product is labeled in accordance with Regulation (EC) no. 1272/2008 (GHS).

### 2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

Breathing in larger amounts of dust can lead to acute flu-like symptoms (zinc fever).

Contact with nitric acid causes poisonous nitric oxides to form.

Reacts slowly with water and intensively with acids, lyes, oxidation mediums and chlorinated hydrocarbons with formation of highly flammable hydrogen – risk of explosion.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Plate-like brass powder

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7440-50-8	Copper			70 - 90 %
	231-159-6		01-2119480154-42	
	Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 2; H302 H400 H411			
7440-66-6	zinc powder - zinc dust (stabilized)			10 - 30 %
	231-175-3	030-001-01-9	01-2119467174-37	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove contaminated soaked clothing immediately. Keep warm and calm injured person. Take away from danger area and lay down affected person.

#### After inhalation

When used as intended, exposure through inhalation is not to be expected. Take affected person away from danger area. Ensure of fresh air. In case of the person being unconscious put him/her in a stable side position. If intensive inhalation of dust seek medical treatment immediately.

#### After contact with skin

Wash off with soap and plenty of water.  
Consult a doctor if skin irritation persists.

#### After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Seek medical treatment by eye specialist.

#### After ingestion

Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person. Summon a doctor immediately. Do not give neutralising liquids.

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

Health injuries are not known or expected under normal use.

Harmful if swallowed.

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

Treat symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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### Suitable extinguishing media

Dry sand, Special powder against metal fire. Never use water.

### Unsuitable extinguishing media

Do not use water. Do not use dry chemical, CO2 or halon.

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

Reacts slowly with water and intensively with acids, lyes, oxidation mediums and chlorinated hydrocarbons with formation of highly flammable hydrogen – risk of explosion.

### 5.3. Advice for firefighters

Use breathing apparatus with independent air supply.

Wear full protective suit.

### Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator. Ensure adequate ventilation. Use personal protective clothing. Get unprotected persons to safety. Keep away from heat and sources of ignition. Avoid contact with the skin and the eyes. Do not inhale vapour/aerosol.

### 6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water. Risk of explosion.

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

Do not use a vacuum cleaner. Take up mechanically and collect in suitable container for disposal. Never use water.

### 6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).

Information for disposal see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Avoid dust formation. Do not breathe vapours/dust. Do not keep containers unlocked. Seal containers tight again after use. Observe the minimum standards in accordance with TRGS 500. Handle in accordance with the general hygienic rules. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Contaminated work clothing should not be allowed out of the workplace.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Vapours are heavier than air and spread along ground. Dusts may form explosive mixture in air when handling the product. Take precautionary measures against static discharges (earthing (grounding) at pouring).

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

#### Requirements for storage rooms and vessels

No special precautions required.

#### Advice on storage compatibility

Keep away from food, drink and animal feeding stuffs. Do not store together with oxidizing and self-igniting products.

Do not store with: oxidizing substances.

#### Further information on storage conditions

Use only in well-ventilated areas. Keep containers tightly closed in a cool, well-ventilated place. Protect from heat and direct solar radiation.

### 7.3. Specific end use(s)

Metal pigment for surface marking

## 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
7440-50-8	Copper, fume	-	0.2		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

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## 8.2. Exposure controls



### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over the use of personal protective equipment. Ensure adequate ventilation. Provide sufficient air exchange and/or exhaust in work rooms.

### Protective and hygiene measures

Avoid contact with eyes and skin. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Take off immediately all contaminated clothing.

### Eye/face protection

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

### Hand protection

Protective gloves resistant to chemicals made off butyl, minimum coat thickness 0,7 mm, permeation resistance (wear duration) > 240 minutes, i.e. protective glove <Butoject 898> made by www.kcl.de.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

### Skin protection

Long sleeved clothing (EN 368). Wear fire retardant protective coveralls. Take precautions against electrostatic discharges.

### Respiratory protection

In case of vapour / mist formation use respirator. In case of insufficient ventilation wear suitable respiratory equipment (gas filter type P1/A) (EN 14387).

### Environmental exposure controls

Do not empty into drains Explosion risk.

## SECTION 9: Physical and chemical properties

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

Physical state:	Solid matter, Powder
Colour:	Gold-coloured
Odour:	characteristic
pH-Value:	Not applicable

### Changes in the physical state

Melting point:	> 900 °C	
Initial boiling point and boiling range:	907 °C	
Softening point:	n.d.	
Flash point:	Not applicable	
Flammability	> 10 Min.	
Explosive properties	The product is considered non-explosive; nevertheless explosive dust/air mixture can be generated	
Auto-ignition temperature	The product is not self-igniting	
Solid:	Not applicable	
Oxidizing properties	The product is not self-igniting	
Vapour pressure: (at 20 °C)	Not applicable	
Density (at 20 °C):	8,96 g/cm <sup>3</sup>	ISO 2811-1
Water solubility:	insoluble	
Solubility in other solvents	n.d.	
Solvent content:	0%	

### 9.2. Other information

Other information  
(n.a. = not applicable; n.d. = not determined)

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts slowly with water and intensively with acids, lyes, oxidation mediums and chlorinated hydrocarbons with formation of highly flammable hydrogen – risk of explosion.

Contact with nitric acid causes poisonous nitric oxides to form.

#### 10.2. Chemical stability

Chemically stable.

#### 10.3. Possibility of hazardous reactions

Heating can release vapours which can be ignited.

#### 10.4. Conditions to avoid

Protect from heat and direct solar radiation.

heat, sparks, open flames, hot surfaces.

Keep away from heat and sources of ignition.

#### 10.5. Incompatible materials

Water, acids, alkalis, oxidizing agents, chlorinated hydrocarbons, acetylene, bromine compounds, chlorine compounds, iodine compounds, Potassium dioxide, nitric acid.

#### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### **Toxicokinetics, metabolism and distribution**

No information available.

##### **Acute toxicity**

Harmful if swallowed.

##### **ATEmix calculated**

ATE (oral) 625,0 mg/kg

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
7440-50-8	Copper				
	oral	ATE	500 mg/kg		

##### **Irritation and corrosivity**

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

##### **Sensitising effects**

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

##### **STOT-single exposure**

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

##### **Severe effects after repeated or prolonged exposure**

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

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

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

##### **Aspiration hazard**

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

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

#### 12.2. Persistence and degradability

Not determined

#### 12.3. Bioaccumulative potential

Not determined

#### 12.4. Mobility in soil

Not determined

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## 12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

## 12.6. Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

This material and its container must be disposed of as hazardous waste. If recycling is not practicable, dispose of in compliance with local regulations. The waste code number must be agreed with the disposer / manufacturer.

#### Waste disposal number of waste from residues/unused products

120104 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; non-ferrous metal dust and particles

#### Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Contaminated packagings are to be treated like the product itself.

Recommended cleaning agent: water with detergents.

## SECTION 14: Transport information

### Land transport (ADR/RID)

#### 14.1. UN number:

UN 3077

#### 14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Brass powder of copper/zinc alloy)

#### 14.3. Transport hazard class(es):

9

#### 14.4. Packing group:

III

Hazard label:

9



Classification code:

M7

Special Provisions:

274 335 375 601

Limited quantity:

5 kg

Excepted quantity:

E1

Transport category:

3

Hazard No:

90

Tunnel restriction code:

E

### Inland waterways transport (ADN)

#### 14.1. UN number:

UN 3077

#### 14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Brass powder of copper/zinc alloy)

#### 14.3. Transport hazard class(es):

9

#### 14.4. Packing group:

III

Hazard label:

9



Classification code:

M7

Special Provisions:

274 335 375 601

Limited quantity:

5 kg

Excepted quantity:

E1

### Marine transport (IMDG)

#### 14.1. UN number:

UN 3077

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**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Brass powder of copper/zinc alloy)

**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

III

Hazard label:

9



Special Provisions:

274, 335, 966, 967, 969

Limited quantity:

5 kg

Excepted quantity:

E1

EmS:

F-A, S-F

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

**14.1. UN number:**

UN 3077

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Brass powder of copper/zinc alloy)

**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

III

Hazard label:

9



Special Provisions:

A97 A158 A179 A197

Limited quantity Passenger:

30 kg G

Passenger LQ:

Y956

Excepted quantity:

E1

IATA-packing instructions - Passenger:

956

IATA-max. quantity - Passenger:

400 kg

IATA-packing instructions - Cargo:

956

IATA-max. quantity - Cargo:

400 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:

yes



**14.6. Special precautions for user**

Take the usual precautions when handling with chemicals.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

The transport takes place only in approved and appropriate packaging.

## SECTION 15: Regulatory information

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

**EU regulatory information**

2004/42/EC (VOC):

0 %

Information according to 2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

Additional information:

**Additional information**

The product is labeled in accordance with Regulation (EC) no. 1272/2008 (GHS).

**National regulatory information**

Water contaminating class (D):

2 - water contaminating

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

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### SECTION 16: Other information

#### Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

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

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

#### Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

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



# Safety Data Sheet

According to the Commission Directive EG 1907 / 2006 Article 31

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## 319-0025 Surface liquid

### 1. Identification of the Substance/Preparation and of the Company/Undertaking

#### 1.1 Identification of the Substance/Preparation:

Surface liquid - Item number according appendix

#### 1.2 Company Identification:

YETI Dentalprodukte GmbH  
Industriestraße 3, D-78234 Engen, Tel. (0049)07733-94100, Fax. (0049)07733-941022

### 2. Hazards Identifications

No fire hazard.

### 3. Composition / Information on Ingredients

Chemical characterisation : Aqueous solution of Zinc chloride and Sodium Acetate as a flocculant  
Aqueous solution of 1,2-Propandiol as a bind and Zinc Chloride as a flocculant

<u>Components</u>	<u>Amount in %</u>
Propylenglykol	min. 99,9
Zinkchlorid ZnCl <sub>2</sub>	-
Natriumacetat NaO <sup>2</sup>	-
Tylose	-
Deionized Water H <sup>2</sup> O	-

### 4. First-Aid Measures

After inhalation:	NA
After contact with skin:	Rinse with plenty of water. Remove contaminated clothes
After contact with eyes:	Rinse immediately with plenty of water
After ingestion (large amounts):	Rinse mouth with water and seek medical attention

### 5. Fire-Fighting Measures

Suitable extinguishing media:	water mist, foam, carbon dioxide, dry powder
Special hazards:	smits toxic fumes under fire conditions
Other information:	--

## 6. Accidental Release Measures

Methods for Cleaning up/taking up: Wipe off with damp cloth and rinse off residues with plenty of water

## 7. Handling and Storage

7.1 Handling: Handling: Avoid any uncontrolled spread.

7.1 Storage: Product must be stored in original container.

## 8. Exposure Controls / Personal Protection

Exposure limits:	NA
General protective measures:	--
Hygiene measures:	Typical occupational hygiene is required
Respiratory protection:	not required
Hand protection:	--
Eye protection:	--
Body protection:	Wear protective gloves, if necessary

## 9. Physical and Chemical Properties

Appearance:	liquid
Color:	clear, colorless
Odour:	odourless
Flash point:	NA
Melting point:	-60C
Boiling point:	187 C (1013 hPa)
Flash point:	107 C
Ignition Temperature:	414 C
Ignition temperature:	NA
Lower explosion limit:	2,6% (in air)
Upper explosion limit:	12,5% (in air)
Bulk density:	--
Vapor Pressure at 20°C:	0.11 hPa
Density at 20°C:	1,036 g/cm <sup>3</sup>
Rel. Vapor Density at 20°C:	2,62
Miscibility:	Ethanol, Diethylether
Solubility:	insoluble in water
Ph value:	6,64

## 10. Stability and Reactivity:

Thermal decomposition:	Carbon monoxide, Carbon dioxide
Hazardous decomposition products:	None.
Hazardous reactions:	Acid chlorides, Acid anhydrides, oxidizing- reducing agents, chloroformates

## 11. Angaben zur Toxikologie

Acute toxicity:	No data available.
Additional information:	Toxicological investigations have not been performed yet.

## 12. Ecological Information:

Elimination:	Can be separated mechanically in public sewage plants.
Ecotoxicological impact:	No data available.
Additional information:	No data available.

### **13. Disposal Considerations:**

If recycling is impossible, dispose in accordance with local, state and federal regulations for relatively nontoxic inorganics.

### **14. Transport Information:**

No regulations for transport of the products.

Road transport ADR/RID: not restricted

Marine transport IMDG/UN: not restricted

Air transport ICAO/IATA-DGR: not restricted

### **15. Regulatory Information:**

Labelling in accordance with GefStoffV/EC. Hazard warning labeling not compulsory.

No dangerous substance or compound to our stand of knowledge according to regulations of dangerous goods or the corresponding guidelines of the European Community.

### **16. Other Information:**

The statements of this Safety Data Sheet correlate to our stand of knowledge and experiences at the date stated below. Flawlessness, reliableness and completeness is not warranted by the publisher.