

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## White Gold Solder

Print date: 21.09.2015

Product code: 380-600-50

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

#### 1.1. Product identifier

White Gold Solder

#### Further trade names

Article No.: 380-600-50

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

##### Use of the substance/mixture

Health services.

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

Company name:	DENTAURUM GmbH & Co. KG		
Street:	Turnstr. 31		
Place:	D-75228 Ispringen		
Telephone:	+49 7231 803 0	Telefax:	+49 7231 803 295
e-mail:	info@dentaurum.de		
Internet:	www.dentaurum.com		

#### Further Information

Emergency telephone:		
07:00 - 16:15 (Mo - Do),	07:00 - 13:15 (Fr)	+49 7231 803 213
16:15 - 18:00 (Mo - Do),	13:15 - 18:00 (Fr)	+49 7231 803 0

### SECTION 2: Hazards identification

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

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: T - Toxic, C - Corrosive, Xn - Harmful  
R phrases:  
Harmful if swallowed.  
Causes burns.  
Limited evidence of a carcinogenic effect.  
May cause sensitisation by skin contact.  
Toxic: danger of serious damage to health by prolonged exposure through inhalation.

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:  
Acute toxicity: Acute Tox. 4  
Skin corrosion/irritation: Skin Corr. 1B  
Serious eye damage/eye irritation: Eye Dam. 1  
Respiratory/skin sensitization: Skin Sens. 1  
Carcinogenicity: Carc. 2  
Specific target organ toxicity - repeated exposure: STOT RE 1  
Hazard Statements:  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.

#### 2.2. Label elements

##### Hazardous components which must be listed on the label

nickel  
Potassium bifluoride; potassium hydrogen difluoride

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Signal word:

Danger

Pictograms:

GHS05-GHS07-GHS08



### Hazard statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Au 77,8%, Ni 16,2%, Zn 6%

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
231-111-4	nickel	>10 - <=20 %
7440-02-0	Carc. Cat. 3, T - Toxic R40-48/23-43	
028-002-00-7	Carc. 2, STOT RE 1, Skin Sens. 1; H351 H372 ** H317	
233-139-2	Boric acid	>1 - <=5 %
10043-35-3	Repr. Cat. 2 R60-61	
005-007-00-2	Repr. 1B; H360FD	
232-156-2	Potassium bifluoride; potassium hydrogen difluoride	>1 - <=5 %
7789-29-9	T - Toxic, C - Corrosive R25-34	
009-008-00-9	Acute Tox. 3, Skin Corr. 1B; H301 H314	

Full text of R-, H- and EUH-phrases: see section 16.

#### Further Information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: Borsäure

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

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### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

### After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

### After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary. After contact with molten product, cool skin area rapidly with cold water.

### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

No information available.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. The product itself does not burn.

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

Non-flammable.

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

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

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

Take up mechanically. 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

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### 7.1. Precautions for safe handling

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid generation of dust. Do not breathe dust.

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

No special fire protection measures are necessary.

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

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

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

#### **Advice on storage compatibility**

No special measures are necessary.

### 7.3. Specific end use(s)

Health services.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls



#### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

#### **Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Caution! Hot molten mass. Avoid contact with skin.

#### **Eye/face protection**

Suitable eye protection: goggles.

#### **Hand protection**

Recommendation:

Vollkontakt z. B.: Dermatril 740 (Fa. KCL)

Suitable material: Nitrile

Thickness of glove material: 0,11 mm

penetration time: > 480 min

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.

#### **Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

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### SECTION 9: Physical and chemical properties

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

Physical state: solid  
 Colour: silver grey  
 Odour: odourless

#### Test method

pH-Value: not determined

#### **Changes in the physical state**

Melting point: not determined  
 Initial boiling point and boiling range: not determined  
 Flash point: not applicable

#### **Flammability**

Solid: not determined  
 Gas: not applicable

Lower explosion limits: not determined  
 Upper explosion limits: not determined

#### **Auto-ignition temperature**

Solid: not determined  
 Gas: not applicable

Decomposition temperature: not determined

#### **Oxidizing properties**

Not oxidizing.

Vapour pressure: not determined

Density: not determined

Water solubility: insoluble

#### **Solubility in other solvents**

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

#### 9.2. Other information

Solid content: not determined

Working Temperature: 870-910°C

### 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

No risks worthy of mention.

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**10.4. Conditions to avoid**

none

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

none

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

**ATEmix calculated**

ATE (oral) 2000,0 mg/kg

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7440-02-0	nickel				
	oral	LD50	> 9000 mg/kg	Rat	
10043-35-3	Boric acid				
	oral	LD50	> 2600 mg/kg	Rat	OECD 401
	dermal	LD50	> 2000 mg/kg	Rabbit	FIFRA (40 CFR 163)
7789-29-9	Potassium bifluoride; potassium hydrogen difluoride				
	oral	ATE	100 mg/kg		

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

**Sensitising effects**

May cause an allergic skin reaction. (Ni)

**STOT-single exposure**

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

**Severe effects after repeated or prolonged exposure**

Causes damage to organs through prolonged or repeated exposure. (Ni)

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

Suspected of causing cancer. (Ni)

**Aspiration hazard**

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

**Additional information on tests**

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].  
Special hazards arising from the substance or mixture!

**SECTION 12: Ecological information****12.1. Toxicity**

The product is not: Ecotoxic.

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CAS No	Chemical name		Method	Dose	[h]   [d]	Species	Source
7440-02-0	nickel						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Danio rerio		
	Acute algae toxicity	ErC50	100 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna		
10043-35-3	Boric acid						
	Acute fish toxicity	LC50	79,7 mg/l	96 h	Pimephales promelas (fathead minnow)	EPA OPPTS 850.1075	
	Acute crustacea toxicity	EC50	93 mg/l	48 h	Daphnia magna (Big water flea)	OECD Guideline 202	
	Fish toxicity	NOEC	6,4 mg/l	34 d	Brachydanio rerio (zebra-fish)	OECD Guideline 210	
	Crustacea toxicity	NOEC	31,6 mg/l	21 d	Lampsilis siliquoidea	ASTM E 2455-6	

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
10043-35-3	Boric acid	-1,09

#### BCF

CAS No	Chemical name	BCF	Species	Source
10043-35-3	Boric acid	< 0.1	Oncorhynchus tshawytscha	

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The product has not been tested.

### 12.6. Other adverse effects

No information available.

#### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Solubility in water (g/l): insoluble

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. For recycling, contact recycling exchanges.

#### Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### 14.6. Special precautions for user

No information available.

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#### **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

not applicable

#### **Other applicable information**

Not a hazardous material with respect to transportation regulations.

### **SECTION 15: Regulatory information**

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

##### **EU regulatory information**

##### **Additional information**

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

##### **National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

#### **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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

#### **Relevant R-phrases (Number and full text)**

Toxic if swallowed.

Causes burns.

Limited evidence of a carcinogenic effect.

May cause sensitisation by skin contact.

Toxic: danger of serious damage to health by prolonged exposure through inhalation.

May impair fertility.

May cause harm to the unborn child.

#### **Relevant H- and EUH-phrases (Number and full text)**

Toxic if swallowed.

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing cancer.

May damage fertility. May damage the unborn child.

Causes damage to organs through prolonged or repeated exposure.

#### **Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other

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products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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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.)*