

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

### 1.1 Product identifier

Solder with flux  
Product code: CEKA SOL W

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

Dental solders  
Professional use

Uses advised against:  
Do not use for purposes other than those listed.

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

ALPHADENT NV, Mannebeekstraat 33, 8790 Waregem, Belgium, T +32 (0)56 629 531

### 1.4 Emergency telephone number

Belgian Poison Control Centre (24 hours) **070 245 245** or call a poison control centre in your area

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Pictograms:  
GHS05, GHS07, GHS08

Hazard class and category code(s):  
Skin Corr. 1B, Skin Sens. 1, Carc. 2, Acute Tox. 4

Hazard statement code(s):  
H302 – Harmful if swallowed.  
H314 – Causes severe skin burns and eye damage.  
H317 – May cause an allergic skin reaction.  
H351 – Suspected of causing cancer.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram and signal word code(s):  
GHS05, GHS07 – Danger



Hazard statement code(s):  
H302 – Harmful if swallowed.  
H314 – Causes severe skin burns and eye damage.  
H317 – May cause an allergic skin reaction.  
H351 – Suspected of causing cancer.

Precautionary statements:

Prevention

P260 – Do not breathe dust/fume/gas/mist/vapours/spray.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

Response

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

Contains:

potassium bifluoride, nickel

### 2.3 Other hazards

Contains:

boric acid – SVHC

The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with the provisions of Legislative Decree No 81 of 9 April 2008. Workers exposed to this chemical agent should not be subject to health surveillance if the results of the risk assessment show that, depending on the type and amount of hazardous chemical agent and the method and frequency of exposure to the agent, there is only a "moderate risk" for the health and safety of workers and that the measures envisaged in the same legislative decree are sufficient to reduce the risk.

## SECTION 3. Composition/information on ingredients

### 3.1 Substances

Irrelevant

### 3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements.

Metal alloy – solder with incorporated flux

Potassium bifluoride and boric acid related only to the incorporated flux

Substance	Concentration	Classification	Index	CAS	EINECS	Reach
nickel	> 10 <= 20%	Skin Sens. 1, H317; Carc. 2, H351; STOT RE 1, H372	028-002-00-7	7440-02-0	231-111-4	
boric acid – SVHC	> 1 <= 5%	Repr. 1B, H360FD	005-007-00-2	10043-35-3	233-139-2	
potassium bifluoride	>= 1 <= 5%	Acute Tox. 3, H301; Skin Corr. 1B, H314	009-008-00-9	7789-29-9	232-156-2	

## SECTION 4. First aid measures

### 4.1 Description of first aid measures

Inhalation:

Air the area. Move the contaminated patient immediately from the area and keep him at rest in a well-ventilated room. CALL A PHYSICIAN.

If breathing stops, give artificial respiration.

Direct contact with skin (with the flux):

Take off immediately all contaminated clothing.

Wash immediately with plenty of water and possibly with soap the areas of the body that have, or are only suspected to have, come in contact with the product.

Consult a physician immediately.

Direct contact with eyes (with the flux):

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect the eyes with a dry sterile gauze. Seek medical advice immediately.

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

**Ingestion:**

The product is harmful and can cause irreversible damage even following a single exposure if swallowed. Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

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

No data available

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

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

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**SECTION 5. Firefighting measures**

**5.1 Extinguishing media**

Advised extinguishing agents:

Water spray, CO<sub>2</sub>, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing means to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

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

No data available

**5.3 Advice for firefighters**

Use respiratory protection.

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction.

A self-contained breathing apparatus may also be used, especially when working in confined and poorly ventilated areas and when using halogenated extinguishers (fluobrene, Solkan 123, naf, etc). Keep containers cool with water spray.

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**SECTION 6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**6.1.1 For non-emergency personnel:**

Leave the area surrounding the spill or release.

Wear mask, gloves and protective clothing.

**6.1.2 For emergency responders:**

Wear mask, gloves and protective clothing.

Provide sufficient ventilation.

**6.2 Environmental precautions**

Contain spill.

The product is recoverable.

Discharge the remains in compliance with the regulations.

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

**6.3.1 For containment:**

Rapidly recover the product. Wear a mask and protective clothing.

Recover the product for reuse, if possible, or removal.

**6.3.2 For cleaning up:**

After wiping up, wash the area and materials involved with water.

**6.3.3 Other information:**

None in particular

**6.4 Reference to other sections**

Refer to paragraphs 8 and 13 for more information.

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**SECTION 7. Handling and storage**

**7.1 Precautions for safe handling**

Avoid contact and inhalation of vapours during processing.  
Do not eat or drink when using this product.  
See also paragraph 8 below.

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

Keep in the original container. No other special measure required.

**7.3 Specific end use(s)**

Professional use:  
Solder with flux. Handle with care.  
Avoid contact and inhalation of vapours during processing.

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**SECTION 8. Exposure controls/personal protection**

**8.1 Control parameters**

Related to the substances contained:  
nickel:

TLV: (inhalable fraction) 1.5 mg/m<sup>3</sup> as TWA A5 (not suspected as a human carcinogen); (ACGIH 2004)  
MAK: (inhalable fraction) sensitisation of respiratory tract and skin (Sah); Carcinogen category: 1;  
(DFG 2004)

**8.2 Exposure controls**



Appropriate engineering controls:

Professional use:

No specific monitoring foreseen

Individual protection measures:

(a) Eye/face protection

When handling the pure product, use safety glasses (cage spectacles) (EN 166).

(b) Skin protection

(i) Hand protection

When handling the pure product, use chemical-resistant protective gloves (EN 374-1/EN 374-2/EN 374-3).

(ii) Other

When handling the pure product, wear full protective skin clothing.

(c) Respiratory protection

Use adequate protective respiratory equipment (EN 141).

(d) Thermal hazards

No hazard to report.

Environmental exposure controls:  
Use according to good working practices to avoid pollution into the environment.

## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Solid	
Odour	Odourless	
Odour threshold	Irrelevant	
pH	Irrelevant	
Melting point/freezing point	865-930 °C	
Initial boiling point and boiling range	Undefined	
Flash point	Non-flammable	ASTM D92
Evaporation rate	Irrelevant	
Flammability (solid, gas)	Irrelevant	
Upper/lower flammability or explosive limits	Irrelevant	
Vapour pressure	Irrelevant	
Vapour density	Irrelevant	
Relative density	Not determined	
Solubility(ies)	Not soluble	
Water solubility	Not soluble	
Partition coefficient	Irrelevant	
Auto-ignition temperature	Irrelevant	
Decomposition temperature	Irrelevant	
Viscosity	Irrelevant	
Explosive properties	Not explosive	
Oxidising properties	Non-oxidising	

### 9.2 Other information

No data available

## SECTION 10. Stability and reactivity

### 10.1 Reactivity

Related to the substances contained:

boric acid:

Stable under normal conditions

### 10.2 Chemical stability

No hazardous reaction when handled and stored according to provisions.

### 10.3 Possibility of hazardous reactions

There are no hazardous reactions.

### 10.4 Conditions to avoid

Nothing to report.

### 10.5 Incompatible materials

Acids, alkalis and oxidising agents

### 10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

ATE(mix) oral = 10,000.0 mg/kg  
ATE(mix) dermal = 0.0 mg/kg  
ATE(mix) inhal = 0.0 mg/l/4 h

- (a) acute toxicity: Harmful product: do not ingest.
- (b) skin corrosion/irritation: Corrosive product: causes severe skin burns and eye damage.
- (c) serious eye damage/irritation: Corrosive product: causes severe skin burns and eye damage.
- (d) respiratory or skin sensitisation: The product, if brought into contact with skin, can cause skin sensitisation.
- (e) germ cell mutagenicity: not applicable
- (f) carcinogenicity: The product may pose a risk of carcinogenesis.
- (g) reproductive toxicity: not applicable
- (h) specific target organ toxicity (STOT) single exposure: not applicable
- (i) specific target organ toxicity (STOT) repeated exposure: not applicable
- (j) aspiration hazard: not applicable

Related to the substances contained:  
nickel:

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of fine dust.

RISKS BY INHALATION: Evaporation at 20 °C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE: May cause mechanical irritation. Inhalation of fumes can cause pneumonia.

EFFECTS OF REPEATED OR LONG-TERM EXPOSURE: Repeated or prolonged contact can cause skin sensitisation. Repeated or prolonged inhalation exposure may cause asthma. The lungs can be damaged by repeated or prolonged exposure. It is possible that this substance is carcinogenic to humans.

#### ACUTE HAZARDS / SYMPTOMS

INHALATION: Cough. Shortness of breath.

NOTE: Depending on the degree of exposure, periodic clinical examinations are indicated. Asthma symptoms often do not manifest themselves for a few hours and are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has had symptoms of asthma caused by contact with this substance should avoid any further contact.

boric acid:

Hazardous health effects:

Through eye contact: Irritations.

If swallowed: May cause nausea, vomiting, intestinal disorders.

For absorption in large quantities: anxiety, ataxia (impaired muscle coordination), fatigue, spasms, change in body temperature.

No other dangerous characteristics are discarded. Maintain the usual precautions in handling chemicals.

May impair fertility.

May cause harm to the unborn child.

Toxic to reproduction category 2

## SECTION 12. Ecological information

### 12.1 Toxicity

Related to the substances contained:

boric acid:

EC50 test (mg/l):

Fish (*Gambusia affinis*) = 5600 mg/l/96h, 1800 mg/l/24h; Classification: Highly toxic

Plants (B) = 1 mg/l; Classification: Extremely toxic  
Use according to good working practices, avoiding to disperse the product in the environment.

potassium bifluoride:  
Use according to good working practices, avoiding to disperse the product in the environment.

**12.2 Persistence and biodegradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Contains:  
boric acid – SVHC

**12.6 Other adverse effects**

No adverse effects

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**SECTION 13. Disposal considerations**

**13.1 Waste treatment methods**

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorised companies. Recover if possible. Operate according to local or national regulations.

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**SECTION 14. Transport information**

**14.1 UN number**

Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

**14.2 UN proper shipping name**

None

**14.3 Transport hazard class(es)**

None

**14.4 Packing group**

None

**14.5 Environmental hazards**

None

**14.6 Special precautions for user**

No data available

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**

It is not intended to carry bulk.

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## SECTION 15. Regulatory information

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

Legislative Decree 3/2/1997 No 52 (Classification, packaging and labelling of dangerous substances). Legislative Decree 14/3/2003 No 65 (Classification, packaging and labelling of dangerous preparations). Legislative Decree 2/2/2002 No 25 (Risks deriving from chemical agents during work). Decree of the Ministry of Labour 26/02/2004 (Occupational exposure limits), Ministerial Decree 03/04/2007 (Implementation of Directive no 2006/8/EC). Regulation (EC) No 1907/2006 (REACH), Regulation (EC) No 1272/2008 (CLP), Regulation (EC) No 790/2009. Legislative Decree 21/09/ 2005 No 238 (Seveso III Directive).

### 15.2 Chemical safety assessment

The supplier has not carried out a chemical safety assessment.

## SECTION 16. Other information

Description of the hazard statements exposed to point 3

H301	Toxic 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.
H360FD	May damage fertility. May damage the unborn child.

Classification based on data of all mixture components

#### GENERAL BIBLIOGRAPHY:

1. Directive 1999/45/EC and subsequent updates
2. Directive 67/548/EEC and subsequent amendments and adjustments
3. Council Regulation (EC) 1907/2006 of the European Parliament (REACH)
4. Regulation (EC) 1272/2008 of the European Parliament (CLP) and subsequent updates
5. Council Regulation (EC) 758/2013 of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 528/2012 of the European Parliament and subsequent updates
8. Council Regulation (EC) 648/2004 of the European Parliament and subsequent updates
9. The Merck Index edition 10
10. Handling Chemical Safety
11. NIOSH – Registry of Toxic Effects of Chemical Substances
12. INRS – Fiche toxicologique
13. Patty – Industrial Hygiene and Toxicology
14. N.I. Sax – Dangerous properties of Industrial Materials, 7<sup>th</sup> edition, 1989

#### Note to the user:

The information in this sheet is based on knowledge available to us on the date of the latest version. The user must ensure the fitness and completeness of the information in relation to the specific use of the product. It should not be interpreted as a guarantee of any specific property of the product. The use of the product does not fall under our direct control. The user has the obligation to observe under their own liability laws and regulations on hygiene and safety. We do not assume liability for improper use.

This sheet replaces and cancels all previous.