

## Safety Data Sheet

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

**1.1 Product identifier** I-BOND 02, I-BOND LO, I-GW

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
I-BOND 02 and I-BOND LO are used as base alloy for ceramic firing.  
I-GW is base alloy for acrylic teeth.

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

Manufacturer/Supplier:

INTERDENT d.o.o.

*Production:*

INTERDENT d.o.o.

Street:

Opekarniška cesta 26

Dol 1

Country code /Postal code/City:

SI-3000 Celje

SI-3342 Gornji Grad

Telephone:

+386(0) 425-62-00

Fax:

+368(0) 490-62-02

#### **1.4 Emergency telephone number**

Emergency phone:

112 (EU)

+386(0) 425-62-00 (Mon. – Fri.: 8.00 – 16.00)

### **SECTION 2: Hazards Identification**

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

Products are not classified as hazardous according to Regulation (EC) No 1272/2008.

#### **2.2 Label elements**

None for the mixture.

#### **2.3 Other hazards**

##### Routes of Entry/Exposure:

Nickel-based alloys in their usual solid form and under normal conditions do not present an inhalation, ingestion, or contact health hazard. Inhalation may occur if dust or fumes are generated. Skin absorption is not likely to occur but irritation may occur when in contact with the skin. Ingestion is not likely to occur. Occupational exposure to nickel may occur by dermal contact or by inhalation of aerosols, dusts, fumes or mists containing nickel.

##### Carcinogenicity:

IARC, NTP, and OSHA classified nickel (metallic) as possibly carcinogenic (2B group by IARC).

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### SECTION 3: Composition / information on ingredients

#### 3.1 Mixtures

Composition range [%]					
Nickel	Chromium	Molybdenum	Silicon	Iron	Niobium, Manganese
62 - 67	22 - 26	8 - 11	0,8 - 2	0 - 1	< 1

Chemical name	CAS Nr. EC-Number INDEX number	%	Classification according to EC 1272/2008	
<b>Nickel</b>	7440-02-0	62 - 67	Hazardous class/hazardous category	Hazardous phrases
	231-111-4		Carc. 2	H351
	028-002-00-7		Skin Sens. 1	H317

#### 3.2 Additional information

For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First Aid Measures

#### 4.1 Description of first aid measures

*After inhalation:*

If dust or other particles are generated during processing, it is necessary to provide adequate ventilation and respiration protection. If dust/particles have been aspirated seek for medical attention.

*After skin contact:*

Instantly wash with water and soap and rinse thoroughly.

*After eye contact:*

Rinse open lid for several minutes under running water.

*After swallowing:*

Wash off mouth with water at first and then drink cca. 100mL of water. In case of persistent symptoms consult doctor.

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

See section 11.

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

n.a.

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### **SECTION 5: Fire Prevention Regulations**

#### **5.1 Extinguishing media**

*Suitable extinguishing agents:*

CO<sub>2</sub>, foam, powder, water

*Unsuitable extinguishing agents:*

n.a.

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

Metallic dust or fumes may be produced during welding, burning, grinding and possibly machining.

#### **5.3 Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Co-ordinate fire-fighting measures to the fire surroundings. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Do not inhale explosion and combustion gases.

### **SECTION 6: Accidental Substance Release Regulations**

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

Use personal protection equipment. Avoid causing and breathing dust. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.2 Environmental precautions**

Do not allow product to enter sewage system or water.

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

Dispose contaminated material according local law.

#### **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**

Prevent formation of dust. If dust is formed, avoid breathing it. Avoid skin and eye contact. The metal powder that is formed during treatment should be suck with vacuum cleaner.

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

Nickel-based dental alloys should be stored in tightly closed and correctly labelled containers.

### 7.3 Specific end use(s)

Products are used in dental laboratories.

## **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

The OEL values for nickel-based alloys are not defined. Because of safety reasons the PEL values for pure metal powder should be considered:

**PELOSHA (Nickel metallic) = 1 mg/m<sup>3</sup>**

### 8.2 Exposure controls

#### *Personal protective equipment*

*General protection and hygienic measures:*

Consider good hygienic precaution

*Breathing equipment:*

Use dust extractor and protective mask with FFP2 filter during treating and polishing.

*Protection of hands:*

Protective gloves during treating and polishing.

*Eye protection:*

Protective goggles during treating and polishing.

## **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	solid
<b>Colour</b>	Silver-grey, metallic
<b>Odour</b>	odourless
<b>Boiling point</b>	n.a.
<b>Melting point</b>	Cca. 1400°C
<b>Density</b>	7,9 -8,4 g/cm <sup>3</sup> at 20°C
<b>Solubility in water</b>	insoluble
<b>Flash point</b>	n.a.
<b>Explosion limits</b>	n.a.

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### 9.2 Other information

None

### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Not determined for product as a whole.

#### **10.2 Chemical stability**

In the product form is stable under normal conditions.

#### **10.3 Possibility of hazardous reaction**

No dangerous reaction known.

#### **10.4 Conditions to avoid**

Dust-generating activities.

#### **10.5 Incompatible materials**

None.

#### **10.6 Hazardous decomposition products**

Metal oxides

### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

*Toxicokinetics, absorption and distribution:*

In normal solid state and in normal industrial use nickel-based alloys are neither inhaled nor in permanent or long-term contact with the skin. The alloys contain nickel (classified as a dangerous substance) which are to be monitored. The penetration in the organism, the absorption and the elimination of nickel and its compounds depend on their physical state and largely on the route of exposure. In humans, nickel ions can be taken up via the skin, via the gastrointestinal tract or by inhalation. Occupational exposure has been shown to give rise to elevated levels of nickel in blood, urine and body tissues, with inhalation as the main route of uptake.

*Acute health effects:*

There is no data available for alloys. Acute effects for metallic nickel are available.

*Rat, oral, LD50:* 9000 mg/kg

*Chronic Health Effects:*

*Irritation:*

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Metallic nickel is not a skin or an eye irritant. Irritation of eyes, skin and respiratory tract may occur by dust and aerosols.

*Sensitization:*

*Skin effects:* The most common health effect of metallic nickel in humans is an allergic skin reaction in those who are sensitive to nickel. Nickel may cause allergic contact dermatitis. Alloys containing nickel are classified for skin sensitization when the release rate of 0,5 µg Ni/cm<sup>2</sup>/week, as measured by the European Standard reference test method EN 1811, is exceeded.

*Respiratory tract:* Asthma in humans is rare.

*Carcinogenicity:*

Nickel and certain nickel compounds have been listed by NTP as being reasonably anticipated to be carcinogens. Nickel is not regulated as a carcinogen by OSHA (29 CFR 1910 Subpart Z). IARC has listed nickel compounds within group 1 (there is sufficient evidence for carcinogenicity in humans).

Although nickel compounds are known human carcinogens, the evidence suggests that the relatively insoluble metallic nickel is less likely to present a carcinogenic hazard than are the nickel compounds that tend to release proportionately more nickel ion.

For metallic nickel and nickel alloys there is limited evidence in humans and experimental animals. IARC classified metallic nickel and alloys in group 2B as possibly carcinogenic.

*Mutagenicity and teratogenicity:*

Data on the reproductive toxicity and mutagenicity of nickel and alloys in humans is limited.

### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

Not available for the product.

#### **12.2 Persistence and degradability**

In fresh and salt water, nickel-based alloys will eventually form metal oxides and precipitate in sediments.

#### **12.3 Bioaccumulative potential**

There is little tendency for bioaccumulation along food chain. Alloy may persist in the environment for long periods based upon the corrosive resistance, insolubility in water, and non-biodegradable properties.

#### **12.4 Mobility in soil**

Not available for the product.

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**12.5 Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to EC 1907/2006 REACH, annex XIII.

**12.6 Other adverse effect**

Not known

**SECTION 13: Disposal considerations**
**13.1 Waste treatment methods**

Dispose according to the local law.

**SECTION 14: Transport Information**

	Land-Road/Railway (ADR/RID):	Inland waterways (ADNR):	Sea (IMDG):	Air (IATA):
<b>14.1 UN number</b>	No data available			
<b>14.2 UN proper shipping name</b>	No data available			
<b>14.3 Transport hazard class(es)</b>	No data available			
<b>14.4 Packing group</b>	No data available			
<b>14.5 Environmental hazards</b>	No data available			
<b>14.6 Special precautions for user</b>	No special precautions			
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	No data available			
Not a dangerous product within the meaning of the transport regulations.				

**SECTION 15: Regulatory information**
**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

*EU Label Information:*

Classification and labeling have been performed according to Regulative 1272/2008.

*EU Hazard Symbol and Indication of Danger:*

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According to Regulation EC 1272/2008 this product is not classified.

### 15.2 Chemical safety assessment

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

### **SECTION 16: Other information**

*Revision:*

Version 06 issued on February 2017 in accordance with EC 1907/2006 (Commission Regulation (EU) 2015/830) and EC 1272/2008.

*Full text of phrase codes used in this safety data sheet:*

H351: Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H317: May cause an allergic skin reaction.

*Legend of abbreviations:*

IARC: International agency for research on cancer

NTP: National toxicology program

OSHA: Occupational safety and health administration

OEL: Occupational exposure limit

LD50: Median lethal dose; the dose causing 50% lethality

OSHA PELs: Permissible Exposure Limits - 8-hour TWA (time-weighted average) concentrations unless otherwise noted.

*References:*

IARC: <https://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-10.pdf>

<http://monographs.iarc.fr/ENG/Monographs/vol49/mono49.pdf>

NTP: <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/nickel.pdf>

OSHA; Exposure limits and health effects.

[https://www.osha.gov/dts/chemicalsampling/data/CH\\_256200.html](https://www.osha.gov/dts/chemicalsampling/data/CH_256200.html)

*Disclaimer of expressed and implied warranties:*

The information contained in the safety data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.