

Material Safety Data Sheet (91/155/EWG) Wirobond® solder

Version nr: 002 EN valid from: 2010-06-22

Replaces version from: 2007-05-18
printed: 2010-06-22

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Product information	Wirobond® solder
Manufacturer/Supplier: BEGO Bremer Goldschlaegerei Wilhelm-Herbst-GmbH & Co. KG D-28359 Bremen www.bego.com Fon: ++49/ (0) 42 1/ 20 28 – 0 Fon: ++49/ (0) 42 1/ 20 28 – 130 DE-LEG-F&E, Dr. R. Strietzel Fax: ++49/ (0) 42 1/ 20 28 – 115	

2. COMPOSITION

Usage as:	brazing material
User:	qualified staff (e. g. dental technicians, dentists)

	Name	Content (*)	CAS-Nr.	EG-Nr.	Risk phrases Remarks
Co	Cobalt	60,5	7440-48-4	231-158-0	Xn/R: 42, 43, 53/S: (2-)22, 24, 37, 61 0,1 mg/m ³ (inhaleable fraction) K3 – cancerogenic EG-category 3 (substances which give cause for concern to provoke cancerogenic reactions by humans) TRGS 900
Cr	Chromium	28,5	7440-47-3	231-157-5	10 mg/m ³ (inhaleable fraction) 6 mg/m ³ (alveolar fraction), Tasks/fields accord. to TRGS 900 Nr. 2.4 Abs. 8 and 9 3 mg/m ³ (alveolar fraction), other applications (common limit value for dusts) TRGS 900
Fe	Iron	1,5	7439-89-6	231-096-4	10 mg/m ³ (inhaleable fraction) 6 mg/m ³ (alveolar fraction), Tasks/fields accord. to TRGS 900 Nr. 2.4 Abs. 8 and 9 3 mg/m ³ (alveolar fraction), other applications (common limit value for dusts) TRGS 900
Mo	Molybdenu m	3	7439-98-7	231-107-2	10 mg/m ³ (inhaleable fraction) 6 mg/m ³ (alveolar fraction), Tasks/fields accord. to TRGS 900 Nr. 2.4 Abs. 8 and 9 3 mg/m ³ (alveolar fraction), other applications (common limit value for dusts) TRGS 900
Si	Silicon	4,5	7440-21-3	215-609-9	10 mg/m ³ (inhaleable fraction) 6 mg/m ³ (alveolar fraction), Tasks/fields accord. to TRGS 900 Nr. 2.4 Abs. 8 and 9

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					3 mg/m ³ (alveolar fraction), other applications (common limit value for dusts) TRGS 900
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* = contents less than 1 mass percent in **Wirobond[®] solder**

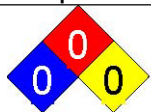
The given information are not valid for the alloy but only for vapours, smokes and dusts which may formed during the processing.

3. HAZARD IDENTIFICATION

By appropriate appliance and regarding the recommendations of the work hygiene it is improbable that **Wirobond[®] solder** exhibits a health risk.

Due to the processing process dusts, fumes and smokes are emerged, which shall not be inhaled. Therefore sufficient exhaustion for dusts, fumes and smokes shall be used.

In specific cases allergic reaction may occur.



NFPA ratings for USA (scale 0-4)

Health = 0

Fire = 0

Reactivity = 0



HMIS rating

Health = *0

Fire = 0

Reactivity = 0

4. FIRST AID MEASURES

If dusts, fumes or smokes were inhaled sufficient fresh air should be provided. If applicable a doctor should be consulted.

In case of eye contact it should be rinsed thoroughly several minutes under running water. If applicable a doctor should be consulted.

If swallowed a doctor should be consulted.

5. FIRE FIGHTING MEASURES

The material is inflammable and not oxidizing. In case of large quantities of dust the danger of dust an explosion is given.

Toxic reaction products may occur by high temperatures.

All extinguishing agents are suitable. Favourable are sodium chloride, dry sand

6. ACCIDENTAL RELEASE MEASURES

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No personal precautions
Contaminations should be picked up mechanically

7. HANDLING AND STORAGE

By appropriate application no special measures for handling or storage are necessary. Sufficient suction should be guaranteed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory protection	Ensure suitable suction If applicable use respirator (particle filter P3 according to DIN EN 143)
Eye protection	If applicable use safety glasses
Hand protection	If applicable use protective gloves (e. g. by known allergies against one or more alloy components)
Working hygiene measures	The usual safety precautions for working with chemical substances should be taken account of. During working to not eat, drink, smoke or snuff tobacco. Regard legal instructions for working hygiene Wash face and hands before break and/or end of work

9. PHYSIAL AND CHEMICAL PROPERTIES

Form	-	wire
Colour	-	silver
Odour		odourless
Melting intervall	°C	1100-1150
Inflammable	-	no
Oxidizing properties	-	no
Density	g/cm ³	approx. 8,5

10. STABILITY AND REACTIVITY

In case of contact with acids the formation of hydrogen is possible.
Dusts due to processing processes (e. g. casting, grinding) may cause in extreme cases dust explosions.

11. TOXICOLOGICAL INFORMATION

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No dangerous reactions are known to occur with correct handling and storage.

12. ECOLOGICAL INFORMATION

Normally chemical substances, which accumulate as residual material, are special refuses. The removal is defined by legal waste management laws and corresponding regulations. In case of doubt contact the public authorities.
Prevent penetration into soil, water and drainage systems.

13. DISPOSAL CONSIDERATIONS

Residual material should be recycled. Disposal according to local authority regulations
Used packaging may also be disposed according to local authority regulations

14. TRANSPORT INFORMATION

Dental alloys are no hazardous materials in the sense of transport regulations (GGVS/GGV E/RID/ADR/IMDG-Code/ICAO-TI).

15. Regulations

Classification according to EU directives: according to preparation directive (1999/45/EG)
No classification necessary
Classification according to national directives:
No classification necessary

16. OTHER INFORMATION

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The information provided in this Material Safety Data Sheet (MSDS) is correct to the best of our knowledge, information and belief at the date of its publication. They describe the product in respect of safety recommendations. The given information do not cause a legal relation ship.

The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warrant or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

The described product is to be used exclusively for the intended use (dental alloy). This version replaces all older issues.

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|------|--|------|---------------------------------------|
| R 11 | easily inflammable | S 17 | Keep away from inflammable substances |
| R 12 | highly inflammable | S 22 | Do not inhale dust |
| R 14 | Reacts intensively with water. | S 24 | Avoid skin contact |
| R 15 | Reacts with water under formation of inflammable gases | S 37 | Use favourable protective gloves |
| R 17 | self inflammable at air | S 61 | Avoid release in to the environment |
| R 40 | Suspicion of cancerogenity | Xn: | hazardous |
| R 42 | Due to inhalation sensibilisation is possible | | |
| R 43 | Due to skin contact sensibilisation is possible | | |
| R 53 | May have long term effects on body water | | |