

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

Region: GB

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

1.1 Product identifier

Trade name

Investment material for partial denture technique

WiroFine (REF: 54344 - 54345, 54348)

Wirovest (REF: 51046, 51048, 51057)

Wirovest plus (REF: 54821 - 54822)

WiroFast (REF: 54834 - 54838)

Wiroplus (REF: 50996, 50998, 51008)

Wiroplus S (REF: 50248, 54353)

Wiroplus N (REF: 51025 - 51027)

WiroOne plus (REF: 54823)

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

Relevant identified uses of the substance or mixture

Manufacturing of dental prosthesis in a dental laboratory

1.3 Details of the supplier of the safety data sheet

Address

BEGO Bremer Goldschlägerei

Wilh. Herbst GmbH & Co. KG

Wilhelm-Herbst-Str. 1

28359 Bremen

Telephone no. +49/ 421/ 2028 – 0

Fax no. +49/ 421/ 2028 – 115

Information provided by / telephone

Research & Development Department - Materials, alloys and ceramics; +49/ 421/ 2028 – 130 (Chief Development Officer alloys)

Advice on Safety Data Sheet

msds@bego.com

1.4 Emergency telephone number

For medical advice (in German and English):

+49/ 551/ 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

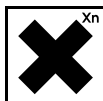
Classification in accordance with Directive 67/548/EEC or 1999/45/EC

Xn; R48/20

2.2 Label elements

Labelling according to Directive 1999/45/EC

Hazard symbols



Harmful

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

Region: GB

Hazardous component(s) to be indicated on label, contains:

 Quartz (SiO₂)
 cristobalite

R phrases

48/20

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

S phrases

7/9

Keep container tightly closed and in a well-ventilated place.

22

Do not breathe dust.

51

Use only in well-ventilated areas.

2.3 Other hazards

 PBT assessment
 No data available.

 vPvB assessment
 No data available.

SECTION 3: Composition/information on ingredients
3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures
Chemical characterization

Mixture (preparation)

Hazardous ingredients

| No | Substance name | | Additional information | |
|----|-----------------------------------|---------------------------|------------------------|--------|
| | CAS / EC / Index / REACH no | Classification 67/548/EEC | Concentration | %-b.w. |
| 1 | Quartz (SiO₂) | | | |
| | 14808-60-7 238-878-4 - - | Xn; R48/20 | > 20,00 - < 60,00 | %-b.w. |
| 2 | cristobalite | | | |
| | 14464-46-1 238-455-4 - - | Xn; R48/20 | > 5,00 - < 30,00 | %-b.w. |
| 3 | MAGNESIUM OXIDE | | | |
| | 1309-48-4 215-171-9 - - | - | > 10,00 - < 30,00 | %-b.w. |

Full Text for all R-phrases: pls. see section 16

SECTION 4: First aid measures
4.1 Description of first aid measures
General information

If the patient is likely to become unconscious, place and transport in stable sideways position. In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Summon a doctor immediately.

After skin contact

In case of contact with skin wash off with water.

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

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After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart and seek medical advice.

After ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Summon a doctor 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

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide; extinguishing powder; Water spray jet; Foam

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

No data available.

5.3 Advice for firefighters

Product itself does not burn. Adapt extinguisher and fire-fighting measures to fire in the environment. Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid dust formation. Refer to protective measures listed in sections 7 and 8.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Take up mechanically. Avoid raising dust. When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Keep container tightly closed.

General protective and hygiene measures

Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Remove soiled or soaked clothing immediately. Do not inhale dust. Keep away from foodstuffs and beverages.

Advice on protection against fire and explosion

No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place.

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

Region: GB

Requirements for storage rooms and vessels

Keep only in the original container.

Advice on storage assembly

Protect against humidity; Do not store together with: explosive substances

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

| No | Substance name | CAS no. | EC no. | |
|-----|---|-------------------|----------------------|----------------------|
| 1 | Dust | | | |
| | List of approved workplace exposure limits (WELs) / EH40 | | | |
| | total inhalable dust | | | |
| | TWA | 10 | mg/m ³ | |
| | List of approved workplace exposure limits (WELs) / EH40 | | | |
| | respirable dust | | | |
| TWA | 4 | mg/m ³ | | |
| 2 | MAGNESIUM OXIDE | 1309-48-4 | 215-171-9 | |
| | List of approved workplace exposure limits (WELs) / EH40 | | | |
| | Magnesium oxide | | | |
| | inhalable dust | | | |
| | Mg | | | |
| | TWA | 10 | mg/m ³ | |
| | List of approved workplace exposure limits (WELs) / EH40 | | | |
| | Magnesium oxide | | | |
| | fume and respirable dust | | | |
| | Mg | | | |
| TWA | 4 | mg/m ³ | | |
| 3 | ammonia, anhydrous | 7664-41-7 | 231-635-3 | |
| | List of approved workplace exposure limits (WELs) / EH40 | | | |
| | Ammonia | | | |
| | STEL | 25 | mg/m ³ | 35 ml/m ³ |
| | TWA | 18 | mg/m ³ | 25 ml/m ³ |
| | 2000/39/EWG | | | |
| | Ammonia, anhydrous | | | |
| | STEL | 36 | mg/m ³ | 50 ml/m ³ |
| TWA | 14 | mg/m ³ | 20 ml/m ³ | |

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses with side protection shield (EN 166)

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

Region: GB

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product . Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|------------------------|--------------|
| Form/Colour | |
| Powder | |
| white | |
| Odour | |
| odourless | |
| Odour threshold | |
| No data available | |
| pH value | |
| Value | 5 - 7 |
| Concentration | 80 % (water) |

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

Replaced version: 1.0.0, issued: 09.03.2012

Region: GB

| | | | |
|--|-----|---|-----------------------|
| Boiling point / boiling range | | | |
| No data available | | | |
| Melting point / melting range | | | |
| No data available | | | |
| Decomposition point / decomposition range | | | |
| No data available | | | |
| Flash point | | | |
| No data available | | | |
| Auto-ignition temperature | | | |
| No data available | | | |
| Oxidising properties | | | |
| No data available | | | |
| Explosive properties | | | |
| No data available | | | |
| Flammability (solid, gas) | | | |
| No data available | | | |
| Lower flammability or explosive limits | | | |
| No data available | | | |
| Upper flammability or explosive limits | | | |
| No data available | | | |
| Vapour pressure | | | |
| No data available | | | |
| Vapour density | | | |
| No data available | | | |
| Evaporation rate | | | |
| No data available | | | |
| Relative density | | | |
| No data available | | | |
| Density | | | |
| No data available | | | |
| Bulk density | | | |
| Value | 1,2 | - | 1,5 g/cm ³ |
| Reference temperature | | | 21 °C |
| Solubility in water | | | |
| No data available | | | |
| Solubility(ies) | | | |
| No data available | | | |
| Partition coefficient: n-octanol/water | | | |
| No data available | | | |
| Viscosity | | | |
| No data available | | | |

9.2 Other information

| | |
|---|--|
| Other information | |
| The product is hygroscopic. | |
| Product hardens with the addition of water. | |

Trade name: Investment material for partial denture technique

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SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Protect from humid air and water.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Under normal heating of the hardened ground-mass in the pre-heat furnace ammonia is released with a concentration of 1 percent by weight. Provide ventilation to exhaust vapours and conduct them directly to the outside.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

No data available

Acute dermal toxicity

No data available

Acute inhalational toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Reproduction toxicity

No data available

Carcinogenicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Contact with the skin and eyes may cause mechanical irritation. Inhalation of dusts may irritate the respiratory tract. Can cause silicosis.

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

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SECTION 12: Ecological information

12.1 Toxicity

| |
|--------------------------|
| Fish toxicity |
| No data available |
| Daphnia toxicity |
| No data available |
| Algae toxicity |
| No data available |
| Bacteria toxicity |
| No data available |

12.2 Persistence and degradability

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

| | |
|---|--------------------|
| Results of PBT and vPvB assessment | |
| PBT assessment | No data available. |
| vPvB assessment | No data available. |

12.6 Other adverse effects

No data available.

12.7 Other information

| |
|--|
| Other information |
| Do not discharge product unmonitored into the environment. |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

Trade name: Investment material for partial denture technique

Current version : 1.0.0, issued: 08.05.2012

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SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

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

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Restriction of occupation

Adhere to the national sanitary and occupational safety regulations when using this product.

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 99/45/EC as amended in each case.

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet

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This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.