

**Trade name:** Investment material for partial denture technique (REF 54344)

**Current version :** 4.0.0, issued: 19.01.2018

**Replaced version:** 3.0.0, issued: 14.03.2016

**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 (REF 54344)**

**WiroFine (REF 54344 - 54345, 54348)**

**Wirovest (REF 51046, 51048, 51057)**

**Wirovest plus (REF 54821 - 54822)**

**WiroFast (REF 54834 - 54838)**

**Wiroplus S (REF 50248, 54353)**

**VarseoVest (REF 54873, 54874, 54875)**

### 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

**Uses advised against**

No data available.

### 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

e-mail msds@bego.com

**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 (0)551 192 40 (Giftinformationszentrum Nord)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

STOT RE 1; H372i

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

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**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)****Hazard pictograms**

GHS08

**Signal word**

Danger

**Hazard statement(s)**

H372i Causes damage to organs through prolonged or repeated exposure if inhaled.

**Precautionary statement(s)**

P260 Do not breathe dust.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container to a facility in accordance with local and national regulations.

**Labelling information**

This product contains more than 10% quartz (fine fraction) which is classified as STOT RE1.

**2.3 Other hazards**

Depending on the handling and use (eg. grinding, drying) formation of airborne respirable crystalline silica is possible. Prolonged and / or massive inhalation of respirable crystalline silica can cause silicosis disease (silicosis). Main symptoms of silicosis are cough and breathing problems / shortness of breath.

In case of irregular exposure to respirable crystalline silica appropriate safety and surveillance measures should exist. The handling of the product should be carried out with special care in order to avoid dust formation.

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****Hazardous ingredients**

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	<b>Quartz (SiO<sub>2</sub>)</b>			
	14808-60-7 238-878-4 - -	STOT RE 1; H372i	>= 5.00 - < 10.00	%-b.w.
2	<b>cristobalite</b>			
	14464-46-1 238-455-4 - -	STOT RE 1; H372i	< 5.00	%-b.w.
3	<b>MAGNESIUM OXIDE</b>			
	1309-48-4 215-171-9 - -	-	>= 5.00 - < 10.00	%-b.w.

Full Text for all H-phrases and EUH-phrases: pls. see section 16

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No	Route, target organ, concrete effect
1	H372i inhalational; -; -
2	H372i inhalational; -; -

## 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. Call a doctor immediately.

#### After skin contact

In case of contact with skin wash off with water.

#### 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. Call 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

High power 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".

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**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. Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far as it is possible by the state of the art.

**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.

**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		
	<b>List of approved workplace exposure limits (WELs) / EH40</b>		
	total inhalable dust		
	TWA	10	mg/m <sup>3</sup>
	<b>List of approved workplace exposure limits (WELs) / EH40</b>		
	respirable dust		
	TWA	4	mg/m <sup>3</sup>
2	MAGNESIUM OXIDE	1309-48-4	215-171-9
	<b>List of approved workplace exposure limits (WELs) / EH40</b>		
	Magnesium oxide		
	inhalable dust		
	Mg		
	TWA	10	mg/m <sup>3</sup>
	<b>List of approved workplace exposure limits (WELs) / EH40</b>		
	Magnesium oxide		
	fume and respirable dust		
	Mg		
	TWA	4	mg/m <sup>3</sup>

**8.2 Exposure controls****Appropriate engineering controls**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn.

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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.

Respiratory filter (part): FP2 - FP3

**Eye / face protection**

Safety glasses with side protection shield (EN 166)

**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)

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**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 <sup>3</sup>
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.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Dangerous reactions are not expected if the product is handled according to its intended use.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

### 10.3 Possibility of hazardous reactions

None, if handled according to order.

### 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.

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## SECTION 12: Ecological information

### 12.1 Toxicity

**Toxicity to fish (acute)**

No data available

**Toxicity to fish (chronic)**

No data available

**Toxicity to Daphnia (acute)**

No data available

**Toxicity to Daphnia (chronic)**

No data available

**Toxicity to algae (acute)**

No data available

**Toxicity to algae (chronic)**

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.



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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.

### 14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

### 14.6 Special precautions for user

No data available.

### 14.7 Transport in bulk according to Annex II of Marpol 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

#### **Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

#### **REACH candidate list of substances of very high concern (SVHC) for authorisation**

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

#### **Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

#### **Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is not subject to Part 1 or 2 of Annex I.

#### **Other regulations**

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

### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

## SECTION 16: Other information

#### **Sources of key data used to compile the data sheet:**

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

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

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**

UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

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The safety data sheet describes products with a view to safety requirements.  
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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