

Trade name: BegoForm (REF 52785)

Current version : 3.1.0, issued: 10.04.2019

Replaced version: 3.0.0, issued: 18.07.2016

Region: GB

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

1.1 Product identifier

Trade name

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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

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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 2; H373i

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.

2.2 Label elements

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

Hazard pictograms



GHS08

Signal word

Warning

Hazardous component(s) to be indicated on label:

Quartz (SiO₂)

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Hazard statement(s)

H373i May cause 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.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Labelling information

This product contains between 1% and 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	Classification (EC) 1272/2008 (CLP)	Additional information	
	CAS / EC / Index / REACH no		Concentration	%
1	Quartz (SiO₂)			
	14808-60-7 238-878-4 - -	STOT RE 1; H372i	> 1.00 - < 10.00	%-b.w.
2	zinc oxide			
	1314-13-2 215-222-5 030-013-00-7 01-2119463881-32	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0.50	%-b.w.
3	aluminium oxide			
	1344-28-1 215-691-6 - 01-2119529248-35	-	>= 10.00 - < 25.00	%-b.w.
4	MAGNESIUM OXIDE			
	1309-48-4 215-171-9 - -	-	>= 10.00 - < 25.00	%-b.w.

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

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
2	-	-	M = 1	-

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

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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. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

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

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

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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 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		
	List of approved workplace exposure limits (WELs) / EH40		
	Dust respirable		
	WEL long-term (8-hr TWA reference period)	10	mg/m ³
	Comments	see Definition 44 "Dust"	
	List of approved workplace exposure limits (WELs) / EH40		
	Dust inhalable		
	WEL long-term (8-hr TWA reference period)	4	mg/m ³
	Comments	see Definition 44 "Dust"	
2	aluminium oxide	1344-28-1	215-691-6
	List of approved workplace exposure limits (WELs) / EH40		
	Aluminium oxides		
	total inhalable dust		
	WEL long-term (8-hr TWA reference period)	10	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Aluminium oxides		
	respirable dust		
	WEL long-term (8-hr TWA reference period)	4	mg/m ³
3	MAGNESIUM OXIDE	1309-48-4	215-171-9
	List of approved workplace exposure limits (WELs) / EH40		
	Magnesium oxide		
	inhalable dust		
	Mg		
	WEL long-term (8-hr TWA reference period)	10	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Magnesium oxide		
	fume and respirable dust		
	Mg		
	WEL long-term (8-hr TWA reference period)	4	mg/m ³

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DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	zinc oxide			1314-13-2 215-222-5
	dermal	Long term (chronic)	systemic	83 mg/kg/day
	with reference to: Zn Comments: insoluble			
	inhalative	Long term (chronic)	systemic	5 mg/m ³
	with reference to: Zn Comments: insoluble			

DNEL value (consumer)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	zinc oxide			1314-13-2 215-222-5
	oral	Long term (chronic)	systemic	0.83 mg/kg/day
	with reference to: Zn Comments: insoluble			
	dermal	Long term (chronic)	systemic	83 mg/kg/day
	with reference to: Zn Comments: insoluble			
	inhalative	Long term (chronic)	systemic	2.5 mg/m ³
	with reference to: Zn Comments: insoluble			

PNEC values

No	Substance name		CAS / EC no
	ecological compartment	Type	Value
1	zinc oxide		1314-13-2 215-222-5
	water	fresh water	20.6 µg/L
	with reference to: Zn		
	water	marine water	6.1 µg/L
	with reference to: Zn		
	water	fresh water sediment	117.8 mg/kg
	water	marine water sediment	56.5 mg/kg
	with reference to: Zn, dry weight		
	soil	-	35.6 mg/kg
	with reference to: Zn, dry weight		
	sewage treatment plant	-	100 µg/L

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.

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.

Respiratory filter (part): FP2 - FP3

Eye / face protection

Safety glasses with side protection shield (EN 166)

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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 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.			

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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

Dangerous reactions are not to be expected when handling product according to its intended use.

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	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
LD50	>	5000	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

Acute dermal toxicity			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		

Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
LC50	>	5.7	mg/l
Duration of exposure		4	h
State of aggregation	Dust/mist		
Species	rat		
Method	OECD 403		
Source	ECHA		

Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	non-irritant		

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Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		non-irritant	

Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
Route of exposure		respiratory tract	
Source		ECHA	
Evaluation		non-sensitizing	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Route of exposure		Skin	
Species		Guinea pig	
Method		OECD 406	
Source		ECHA	
Evaluation		non-sensitizing	
Evaluation/classification		Based on available data, the classification criteria are not met.	

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.	

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	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
NOEC		82	µg/l
Duration of exposure		7	day(s)
Species with reference to Source		Daphnia magna pH 6.0 CSR	

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Toxicity to algae (acute)			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
EC50		0.042	mg/l
Duration of exposure		72	h
Species		Algae	
Source		Manufacturer	

Toxicity to algae (chronic)			
No	Substance name	CAS no.	EC no.
1	zinc oxide	1314-13-2	215-222-5
NOEC		19	µg/l
Duration of exposure		7	day(s)
Species with reference to		Pseudokirchneriella subcapitata	
Source		pH 8.0 CSR	

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 XVII 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.

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Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H372i	Causes damage to organs through prolonged or repeated exposure if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Department issuing safety data sheet

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This information is based on our present knowledge and experience.

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.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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