

Trade name: Freeze protected mixing liquid

Current version : 1.0.2, issued: 08.05.2012

Replaced version: 1.0.2, issued: 06.03.2012

Region: GB

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

1.1 Product identifier

Trade name

Freeze protected mixing liquid

Begosol (REF: 51090 - 51091)

BegoForm Liquid (REF: 52786)

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

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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/ 551/ 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information

This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive (1999/45/EC; DPD)

2.2 Label elements

Supplemental label elements

"Safety data sheet available for professional user on request".

2.3 Other hazards

PBT assessment

The components of this product are not considered to be a PBT.

vPvB assessment

The components of this product are not considered to be a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Chemical characterization

Mixture (preparation)

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Hazardous ingredients

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification 67/548/EEC	Concentration
			%-b.w.
1	ethane-1,2-diol		
	107-21-1 203-473-3 603-027-00-1 -	Xn; R22	> 5,00 - < 10,00 %-b.w.
2	silicon dioxide, chemically prepared		
	7631-86-9 231-545-4 - 01-2119379499-16	-	> 50,00 - < 70,00 %-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**

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

Ensure supply of fresh air. Remove affected person from the immediate area.

After skin contact

Wash off immediately with soap and 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

Do not induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Let plenty of water be drunk in small gulps. 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**

Foam; Water spray jet; Carbon dioxide; extinguishing powder

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon monoxide and carbon dioxide

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.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Ensure adequate ventilation. Refer to protective measures listed in sections 7 and 8.

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For emergency responders

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

6.2 Environmental precautions

Collect contaminated water / firefighting water separately. Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). 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

No special measures necessary if stored and handled as prescribed. Provide good ventilation of working area (local exhaust ventilation, if necessary).

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. 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.

Recommended storage temperature

Value 20 - 30 °C

Requirements for storage rooms and vessels

Keep only in the original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on storage assembly

None known

7.3 Specific end use(s)

No data available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.	
1	silicon dioxide, chemically prepared	7631-86-9	231-545-4	
List of approved workplace exposure limits (WELs) / EH40				
Silica, amorphous				
inhalable dust				
	TWA	6	mg/m ³	
List of approved workplace exposure limits (WELs) / EH40				
Silica, amorphous				
respirable dust				
	TWA	2,4	mg/m ³	
2	ethane-1,2-diol	107-21-1	203-473-3	
2000/39/EWG				
Ethylene glycol				
	STEL	104	mg/m ³	40 ml/m ³
	TWA	52	mg/m ³	20 ml/m ³
	Skin resorption / sensibilisation		Skin	
List of approved workplace exposure limits (WELs) / EH40				
Ethane 1,2-diol				
particulate				
	TWA	10	mg/m ³	
	Skin resorption / sensibilisation		Sk	
List of approved workplace exposure limits (WELs) / EH40				
Ethane 1,2-diol				
vapour				
	STEL	104	mg/m ³	
	TWA	52	mg/m ³	
	Skin resorption / sensibilisation		Sk	

DNEL und PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no
	Route of exposure	Exposure time	Effect	Value
1	silicon dioxide, chemically prepared			7631-86-9 231-545-4
	inhalational	Long term (chronic)	systemic	4 mg/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.

Eye / face protection

Safety glasses (EN 166)

Hand protection

In case of intensive contact, wear protective gloves (EN 374). 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.

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Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour			
liquid			
opaline; milky			
Odour			
sweetish			
Odour threshold			
No data available			
pH value			
Value	8,0	-	10,5
Boiling point / boiling range			
Value	appr.	100	°C
Melting point / melting range			
Value	appr.	-15	°C
Decomposition point / decomposition range			
No data available			
Flash point			
not determined			
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			
Value	appr.	20	hPa
Reference temperature		20	°C
Vapour density			
No data available			
Evaporation rate			
No data available			
Relative density			
No data available			
Density			
Value	1,05	-	1,50 g/cm ³
Reference temperature		20	°C

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Solubility in water	
No data available	
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
No data available	
Viscosity	
Value	2 - 50 mPa*s
Reference temperature	20 °C
Type	dynamic

9.2 Other information

Other information
No data available.

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

None, if handled according to order.

10.5 Incompatible materials

strong oxidizing agents; Rubber; Electrolytes; cationic agents

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity	
LD50	> 10000 mg/kg
Species	rat
Reference substance	silicon dioxide
LD50	4700 mg/kg
Species	rat
Reference substance	Ethane-1,2-diol
LDLo	786 mg/kg
Species	Human
Reference substance	Ethane-1,2-diol
Acute dermal toxicity	
LD50	> 5000 mg/m ³
Species	rabbit
Reference substance	silicon dioxide
LD50	> 9530 mg/m ³
Species	rabbit
Reference substance	Ethane-1,2-diol

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Acute inhalational toxicity			
LC50	>	2000	mg/m ³
Duration of exposure		4	h
Species	rat		
Reference substance	silicon dioxide		
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			

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity			
LC50	>	10000	mg/l
Duration of exposure		96	h
Species	Brachydanio rerio		
Reference substance	silicon dioxide		
Method	OECD 203		
LC50	>	10000	mg/l
Duration of exposure		96	h
Species	Oncorhynchus mykiss		
Reference substance	Ethane-1,2-diol		
Method	OECD 203		
Daphnia toxicity			
EC50	>	10000	mg/l
Duration of exposure		24	h
Species	Daphnia magna		
Reference substance	silicon dioxide		
Method	OECD 202		
EC50	>	10000	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Reference substance	Ethane-1,2-diol		
Method	OECD 202		

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Algae toxicity	
EC50	> 10000 mg/l
Duration of exposure	72 h
Species	Scenedesmus subspicatus
Reference substance	silicon dioxide
Method	OECD 201
IC50	> 10000 mg/l
Duration of exposure	72 h
Species	Scenedesmus quadricauda
Reference substance	Ethane-1,2-diol
Method	OECD 201

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	The components of this product are not considered to be a PBT.
vPvB assessment	The components of this product are not considered to be a vPvB.

12.6 Other adverse effects

Other adverse effects	
No ecological effect is to be expected, if used and handled as intended.	

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.

14.6 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.

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

R22

Harmful if swallowed.

Department issuing safety data sheet

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