

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

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

1.1 Product identifier

Trade name

Wiromelt (REF 52526)

Substance name diboron trioxide
 REACH registration no. 01-2119486655-24

Identification numbers

CAS no. 1303-86-2
 EC no. 215-125-8
 Index no. 005-008-00-8

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)

Repr. 1B; H360FD

Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
-	Repr. 1B; H360FD: C \geq 3.1%	-	-

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 and 4 of Annex I to CLP.

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

2.2 Label elements

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

Product identifier

1303-86-2 (diboron trioxide)

Hazard pictograms

GHS08

Signal word

Danger

Hazard statements

H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P281 Use personal protective equipment as required.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container to hazardous or special waste collection point.

Supplemental label elements

"Restricted to professional users"

2.3 Other hazards

PBT assessment

The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

vPvB assessment

The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name diboron trioxide
Formula B₂O₃
Molecular weight 69.61

Identification numbers

CAS no. 1303-86-2
EC no. 215-125-8
Index no. 005-008-00-8

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persisting adverse effects, consult a physician. If the patient is likely to become unconscious, place and transport in stable sideways position. 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. Take medical treatment.

After skin contact

In case of contact with skin wash off with water. Consult a doctor if skin irritation persists.

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

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). In case of irritation consult an ophthalmologist.

After ingestion

Let plenty of water be drunk in small gulps. 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. Wear protective clothing. Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid dust formation. Avoid contact with skin, eyes and clothing. 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.

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

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 possible by the state of the art. Provide good ventilation of working area (local exhaust ventilation, if necessary). Avoid absolutely dust formation and dust deposition.

General protective and hygiene measures

Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale dust. Store work clothing separately. Provide eye wash fountain in work area.

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of ignition.

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. Keep under lock and key or accessible only to specialists or people who are authorized.

Requirements for storage rooms and vessels

Keep only in the original container.

Advice on storage assembly

Do not store together with: strong oxidizing agents; explosive substances; ammonium nitrate; Peroxides

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	diboron trioxide	1303-86-2	215-125-8
List of approved workplace exposure limits (WELs) / EH40			
Diboron trioxide			
	STEL	20	mg/m ³
	TWA	10	mg/m ³
2	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

DNEL and PNEC values

DNEL values (worker)

No	Substance name	CAS / EC no	
	Route of exposure	Exposure time	Effect
	Value		
1	diboron trioxide		
	dermal	Long term (chronic)	systemic
	inhalative	Long term (chronic)	systemic
			220.6 mg/kg/day
			4.66 mg/m ³

DNEL value (consumer)

No	Substance name	CAS / EC no	
	Route of exposure	Exposure time	Effect
	Value		
1	diboron trioxide		
	oral	Long term (chronic)	systemic
	oral	Short term (acut)	systemic
	dermal	Long term (chronic)	systemic
	inhalative	Long term (chronic)	systemic
			0.55 mg/kg/day
			0.55 mg/kg/day
			110.3 mg/kg/day
			2.34 mg/m ³

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	diboron trioxide		1303-86-2 215-125-8	
	water	fresh water	2.9	mg/l
	water	marine water	2.9	mg/l
	water	Aqua intermittent	13.7	mg/l
	soil	-	5.7	mg/kg dry weight
	sewage treatment plant	-	10	mg/l

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.

Respirator P2

Eye / face protection

Safety glasses (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.

Appropriate Material nitrile rubber
 Material thickness 0.11 mm
 Breakthrough time > 480 min.

Other

Chemical-resistant work clothes.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
solid	
white	
Odour	
odourless	
Odour threshold	
No data available	
pH value	
Value	4
Reference temperature	25 °C
Concentration	10 g/l

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

Boiling point / boiling range	
No data available	

Melting point / melting range	
Value	450 °C

Decomposition point / decomposition range	
No data available	

Flash point	
Remarks	nonflammable

Auto-ignition temperature	
No data available	

Oxidising properties	
none	

Explosive properties	
The product does not have explosive properties.	

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	
Value	2.46 g/cm ³
Reference temperature	20 °C

Bulk density	
Value	appr. 900 - 1100 kg/m ³

Solubility in water	
Value	36 g/l
Reference temperature	25 °C

Solubility(ies)	
No data available	

Partition coefficient: n-octanol/water	
No data available	

Viscosity	
No data available	

9.2 Other information

Other information	
No data available.	

Trade name: Wiromelt (REF 52526)

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SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Keep away sources of ignition. Protect from humid air and water.

10.5 Incompatible materials

Alkalis; Alkali metals; Acids; hydrogen fluoride; Halogenated hydrocarbons; acid halogenide; Water

10.6 Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	diboron trioxide	1303-86-2	215-125-8
LD50	>	2600	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

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	Substance name	CAS no.	EC no.
1	diboron trioxide	1303-86-2	215-125-8
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are met.		

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

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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.

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

The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

vPvB assessment

The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

12.6 Other adverse effects

No data available.

12.7 Other information

Other information

Do not discharge product unmonitored into the environment.

Trade name: Wiromelt (REF 52526)

Current version : 1.1.0, issued: 28.04.2016

Replaced version: 1.0.4, issued: 19.10.2015

Region: GB

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.

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)

In accordance with the Reach regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

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

The substance meets the criteria in Article 57 in association with Article 59 of the REACH regulation (EC) 1907/2006 and is placed on the list of candidates considered for inclusion in annexe XIV (substances subject to Authorisation).

No	Substance name	CAS no.	EC no.
1	diboron trioxide	1303-86-2	215-125-8

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

The substance is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII.

No	Substance name	CAS no.	EC no.	No
1	diboron trioxide	1303-86-2	215-125-8	30

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

This substance is not subject to Part I 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

For this substance a chemical safety assessment has been carried out.

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Region: GB

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

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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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