

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

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

1.1 Product identifier

Trade name

VarseoWax® CAD/Cast (REF 41000, 41020)

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

Relevant identified uses of the substance or mixture

Photopolymer for manufacturing burn-out partial dentures in 3D printing process

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)

Aquatic Chronic 2; H411
Eye Irrit. 2; H319
Skin Irrit. 2; H315
Skin Sens. 1; H317

2.2 Label elements

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

Hazard pictograms



GHS07



GHS09

Signal word

Warning

Hazardous component(s) to be indicated on label:

7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane 1,16-diyl bismethacrylate
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Hazard statements (EU)

EUH208 Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-propenoate, Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3 propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-. May produce an allergic reaction.

Precautionary statements

P261 Avoid breathing spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards

PBT assessment
No data available.
vPvB assessment
No data available.

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

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	Alicyclic diacrylate (ECHA Reference number: 18-0000000381-84-0000)		
	-	Skin Irrit. 2; H315	>= 30.00 - < 70.00 %-b.w.
	-		
	-		
2	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane 1,16-diyl bismethacrylate		
	72869-86-4 276-957-5 -	Aquatic Chronic 2; H411 Eye Irrit. 2; H319 Skin Sens. 1; H317	> 20.00 - < 50.00 %-b.w.
	-		
3	heterocyclic acrylate (Ref.: 722 43/00/2015.0001, Germany)		
	-	Eye Irrit. 2; H319	> 10.00 - < 30.00 %-b.w.
	-	Skin Irrit. 2; H315	
	-		
	-		
4	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide		
	162881-26-7 -	Aquatic Chronic 4; H413	> 0.10 - < 5.00 %-b.w.
	015-189-00-5 01-2119900459-37	Skin Sens. 1; H317	
	-		
5	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-propenoate		
	55818-57-0 500-130-2 -	Skin Sens. 1; H317	< 5.00 %-b.w.
	-		
	-		
6	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.,.alpha."-1,2,3 propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-		
	52408-84-1 -	Eye Irrit. 2; H319	< 5.00 %-b.w.
	-	Skin Sens. 1; H317	
	-		
	-		

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of allergic symptoms, especially respiratory tract related, seek medical help immediately.

After inhalation

Ensure supply of fresh air. Remove affected person from the immediate area. When vapours are intensively inhaled, seek medical help immediately.

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.

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

After ingestion

Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

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; Dry chemical extinguisher; 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. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation. Do not inhale vapours. 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

Collect contaminated water / firefighting water separately. 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 with absorbent material (e.g., sand, kieselguhr, universal binder). 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

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. Do not inhale vapours.

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 in a well-ventilated place.

Recommended storage temperature

Value 15 - 35 °C

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

Requirements for storage rooms and vessels

No special measures required.

Advice on storage assembly

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

DNEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			162881-26-7	
				-	
	dermal	Long term (chronic)	systemic	3.33	mg/kg/day
	dermal	Short term (acute)	systemic	3.33	mg/kg/day
	inhalative	Long term (chronic)	systemic	7.84	mg/m ³
	inhalative	Short term (acute)	systemic	7.84	mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			162881-26-7	
				-	
	oral	Long term (chronic)	systemic	1.67	mg/kg/day
	oral	Short term (acute)	systemic	1.67	mg/kg/day
	dermal	Long term (chronic)	systemic	1.67	mg/kg/day
	dermal	Short term (acute)	systemic	1.67	mg/kg/day
	inhalative	Long term (chronic)	systemic	1.93	mg/m ³
	inhalative	Short term (acute)	systemic	1.93	mg/m ³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide		162881-26-7	
			-	
	water	fresh water	0.8	µg/l
	water	marine water	0.8	µg/l
	water	Aqua intermittent	0.8	µg/l
	sewage treatment plant	-	1.00	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 aerosol and mist 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: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

Hand protection

In case of thermal processing, thermally insulating protective gloves are to be used. 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
liquid, viscous
yellow

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

Odour			
No data available			
Odour threshold			
No data available			
pH value			
No data available			
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			
Value	1.06	-	1.10 g/cm ³
Reference temperature			22 °C
Solubility in water			
No data available			
Solubility(ies)			
No data available			
Partition coefficient: n-octanol/water			
No data available			
Viscosity			
Value	250	-	700 mPa*s

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

9.2 Other information

Other information

No data available.

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

None, if handled according to intended use.

10.5 Incompatible materials

strong oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products known.

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

Inhalation of vapours in higher concentration may lead to irritation of eyes, nose and respiratory tract. Inhalation of vapours may lead to headache, drowsiness and dizziness.

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

Replaced version: 4.0.0, issued: 10.06.2015

Region: GB

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.

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

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Region: GB

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	9
Classification code	M6
Packing group	III
Hazard identification no.	90
UN number	UN3082
Technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Danger releasing substance	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazaheptadecane 1,16-diyl bismethacrylate
Tunnel restriction code	E
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Danger releasing substance	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazaheptadecane 1,16-diyl bismethacrylate
EmS	F-A+S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Danger releasing substance	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazaheptadecane 1,16-diyl bismethacrylate
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

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 73/78 and the IBC Code

Not relevant

Trade name: VarseoWax® CAD/Cast (REF 41000, 41020)

Current version : 5.0.0, issued: 30.06.2015

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Region: GB

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 subject to Part I of Annex I, risk category:	E2
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Other regulations

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

15.2 Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out.

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.

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

H413 May cause long lasting harmful effects to aquatic life.

Department issuing safety data sheet

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This information is based on our present state of knowledge and experience.

The security data sheet describes products with a view to the security requirements.

However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

Alterations/supplements:

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

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