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

1.1 Product identifier

Trade name

VarseoSmile Temp A2 (REF 41022)

VarseoSmile Temp A3 (REF 41023)

VarseoSmile Temp C2 (REF 41024)

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

Relevant identified uses of the substance or mixture
Resin for 3D printing of crown and bridge restorations

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 4; H413
Eye Irrit. 2; H319
Skin Irrit. 2; H315
Skin Sens. 1; H317
STOT SE 3; H335

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



GHS07

Signal word
Warning

Hazardous component(s) to be indicated on label:
Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P312	Call a POISON CENTER/doctor if you feel unwell.
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 to a facility in accordance with local and national regulations.

2.3 Other hazards

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	**Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid**			
	41637-38-1 - - -	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 STOT SE 3; H335 Aquatic Chronic 4; H413	>= 50.00 - < 75.00	%-b.w.
2	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**			
	75980-60-8 278-355-8 015-203-00-X 01-2119972295-29	Aquatic Chronic 2; H411 Skin Sens. 1B; H317 Repr. 2; H361fd	< 2.50	%-b.w.

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. 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.

After skin contact
In case of contact with skin wash off immediately with copious amounts of 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. 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; Extinguishing powder; Water spray jet; Alcohol-resistant foam

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); Phosphorus oxides

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
Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away sources of ignition. 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
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 at the work area (local exhaust ventilation, if necessary). 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. Keep away from food, drink and animal feeding stuffs. Avoid contact with eyes and skin. Provide eye wash fountain in work area.

Advice on protection against fire and explosion
Keep away from sources of heat and 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. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels
Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original one.

Advice on storage assembly
Do not store together with: Oxidizing agents

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**			**75980-60-8 278-355-8**	
	dermal	Long term (chronic)	systemic	1	mg/kg/day
	inhalative	Long term (chronic)	systemic	3.5	mg/m³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**		**75980-60-8 278-355-8**	
	water	fresh water	0.004	mg/l
	water	marine water	0	mg/l
	water	fresh water sediment	0.29	mg/kg dry weight
	water	marine water sediment	0.029	mg/kg dry weight
	soil	-	0.056	mg/kg dry weight

8.2 Exposure controls

Appropriate engineering controls
Ensure adequate ventilation, local exhaust at the work station if necessary.

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)

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
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
liquid
Various, depending on coloration

Odour
No data available

Odour threshold
No data available

pH value
No data available

Boiling point / boiling range		
Value	150	°C

Melting point / melting range
No data available

Decomposition point / decomposition range
No data available

Flash point		
Value	110	°C

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	1.4	-	1.5	g/cm³
Reference temperature			20	°C

Solubility in water
No data available

Solubility(ies)
No data available

Partition coefficient: n-octanol/water

No	**Substance name**	**CAS no.**	**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**	**278-355-8**

log Pow		3.1	
Reference temperature		23	°C
Method	OECD 117		
Source	ECHA		

Viscosity
No data available

9.2 Other information

Other information
No data available.

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
None, if handled according to order.

10.4 Conditions to avoid
Heat, naked flames and other ignition sources.

10.5 Incompatible materials
strong oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products known. In case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
LD50	>	5000		mg/kg bodyweight
Species	rat			
Method	OECD 401			
Source	ECHA			

Acute dermal toxicity				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
LD50	>	2000		mg/kg bodyweight
Species	rabbit			
Method	OECD 402			
Source	ECHA			

Acute inhalational toxicity
No data available

Skin corrosion/irritation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**	**278-355-8**
Species	rabbit		
Source	ECHA		
Evaluation	non-irritant		

Serious eye damage/irritation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**	**278-355-8**
Species	rabbit		
Source	ECHA		
Evaluation	non-irritant		

Respiratory or skin sensitisation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**	**278-355-8**
Route of exposure	Skin		
Species	mouse		
Method	OECD 429		
Source	ECHA		
Evaluation	sensitizing		

Germ cell mutagenicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**	**278-355-8**
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Reproduction toxicity				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
Route of exposure	oral			
NOAEL		150		mg/kg bw/d
Species	rat			
Method	OECD 414			
Source	ECHA			
Evaluation/classification	Based on available data, the classification criteria are met.			

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

Toxicity to fish (acute)
No data available

Toxicity to fish (chronic)
No data available

Toxicity to Daphnia (acute)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
EC50		3.53		mg/l
Duration of exposure		48		h
Species	Daphnia magna			
Method	OECD 202			
Source	ECHA			

Toxicity to Daphnia (chronic)
No data available

Toxicity to algae (acute)				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
EC50	>	2.01		mg/l
Duration of exposure		72		h
Species	Pseudokirchneriella subcapitata			
Method	OECD 201			
Source	ECHA			

Toxicity to algae (chronic)
No data available

Bacteria toxicity
No data available

12.2 Persistence and degradability

Biodegradability				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
Type	aerobic biodegradation			
Value	0	-	10	%
Duration			28	day(s)
Method	OECD 301 F			
Source	ECHA			
Evaluation	not readily biodegradable			

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water				
No	**Substance name**	**CAS no.**		**EC no.**
1	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide**	**75980-60-8**		**278-355-8**
log Pow			3.1	
Reference temperature			23	°C
Method	OECD 117			
Source	ECHA			

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.

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	
The product is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII.	No 3

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.

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

H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	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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