

**Trade name:** VarseoSmile TriniQ**Current version :** 1.2.0, issued: 22.03.2023**Replaced version:** 1.1.0, issued: 20.03.2023**Region:** USA**SECTION 1: Identification****1.1 Product identifier**

Trade name

**VarseoSmile TriniQ****Valid for all colours and fillings****1.2 Recommended use of the chemical and restrictions on use****Recommended use of the chemical and restrictions on use**

Resin for 3D printing of dental restorations

**Restrictions on use**

No data available.

**1.3 Details of the supplier of the safety data sheet****Address**BEGO USA, Inc.  
24 Albion Road, Suite 103  
Lincoln RI 02865Telephone no. 401-334-9261  
e-mail begoinfo@begousa.com**Identification of the manufacturer****Address**BEGO Bremer Goldschlägerei  
Wilhelm-Herbst-Str. 1  
28359 Bremen  
GermanyTelephone no. +49/ 421/ 2028-0  
e-mail msds@bego.com**1.4 Emergency phone number**BEGO USA  
1-774 571 0395**SECTION 2: Hazard(s) identification****2.1 Classification of the chemical****Classification of the chemical in accordance with paragraph (d) of 29 CFR § 1910.1200 "Hazard Communication"**

Eye Irritation - Category 2A

Reproductive Toxicity - Category 1B

Skin Corrosion / Irritation - Category 2

Skin sensitization - Category 1

Specific Target Organ Toxicity - Single Exposure - respiratory tract irritation - Category 3

**2.2 Label elements****Pictogram(s)****Signal word**

Danger

**Hazard Statement(s)**

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Health hazards	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation May cause respiratory irritation May damage fertility or the unborn child.
<b>Precautionary Statement(s)</b>	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing fume/ gas/ mist/ vapours/ spray. Wash exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Specific treatment (see first aid instruction on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations

**2.3 Labelling information**

No data available

**2.4 Hazards not otherwise classified (HNOC)**

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	Concentration	%
	CAS no.		
1	<b>Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid</b>		
	41637-38-1	>= 50.00 - < 70.00	%-b.w.
2	<b>Benzeneacetic acid, .alpha.-oxo-, methyl ester</b>		
	15206-55-0	< 5.00	%-b.w.
3	<b>diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide</b>		
	75980-60-8	< 2.50	%-b.w.

**3.3 Other information**

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of 29 CFR 1910.1200

**SECTION 4: First-aid measures****4.1 Description of necessary 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**

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Remove affected person from the immediate area. Ensure supply of fresh air. In case of persisting adverse effects, consult a physician.

**After skin contact**

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

**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). If eye irritation persists: Get medical advice/attention.

**After ingestion**

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

**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**

Treat symptomatically.

**SECTION 5: Fire-fighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide; Extinguishing powder; Water spray jet; Alcohol-resistant foam

**Unsuitable extinguishing media**

Full water jet

**5.2 Specific hazards arising from the chemical**

In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); Phosphorus oxides

**5.3 Special protective equipment and precautions for fire-fighters**

Use self-contained breathing apparatus. Wear full protective suit. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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

Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away from ignition sources. Do not inhale vapours.

**For emergency responders**

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

**6.2 Methods and materials for containment and cleaning up**

Take up with absorbent material (e.g., sand, diatomaceous earth, universal binder). When collected, handle material as described under the section heading "Disposal considerations".

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Precautions for safe handling**

Provide good ventilation of working area (local exhaust ventilation if necessary). Risks inherent to handling the product must be minimised by applying appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

**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. Do not inhale vapours. Avoid contact with eyes and skin. Provide eye wash fountain in work area. Hold emergency shower available.

**Advice on protection against fire and explosion**

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Keep away from sources of heat and ignition. Pay attention to general rules of internal fire prevention. Take precautionary measures against electrostatic loading (earthing necessary during loading operations).

## 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 resealed and kept upright to prevent leakage. Always keep in containers of same material as the original.

### Incompatible products

Substances to be avoided: see chapter 10.

## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

#### Occupational exposure limit(s)

No	Substance name	CAS no.
1	titanium dioxide	13463-67-7
<b>OSHA Permissible Exposure Limits (PELS)</b>		
Titanium dioxide Total dust		
	TWA	15 mg/m <sup>3</sup>
<b>ACGIH Threshold Limit Values</b>		
Titanium dioxide Nanoscale particles		
	TWA	0,2 (R) mg/m <sup>3</sup>
	Remarks	A3
<b>ACGIH Threshold Limit Values</b>		
Titanium dioxide Finescale particles		
	TWA	2,5 (R) mg/m <sup>3</sup>
	Remarks	A3

### 8.2 Exposure controls

#### Appropriate engineering controls

Provide good ventilation of working area (local exhaust ventilation if necessary).

#### Individual protection measures, such as 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

##### Hand protection

Sufficient protection is given wearing suitable protective gloves in the event of risk of skin contact with the product. Before use, the protective glove 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 In case of short-term contact / splash protection:

Appropriate Material	nitrile		
Material thickness		0.12	mm
Breakthrough time	30 - 60		min

Appropriate Material In case of longer-term contact:

Appropriate Material	nitrile		
Appropriate Material	neoprene		
Material thickness		0.2	mm
Breakthrough time	240 - 480		min
Appropriate Material	nitrile		
Breakthrough time	>	480	min

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**Other protection measures**  
Chemical-resistant work clothes.

## SECTION 9: Physical and chemical properties

<b>Form/Color</b>	
Liquid	
Various, depending on coloration	
<b>Odor</b>	
No data available	
<b>Odor threshold</b>	
No data available	
<b>pH value</b>	
Not applicable	
Source	supplier
<b>Boiling point / boiling range</b>	
Value	150 °C
Source	supplier
<b>Melting point / melting range</b>	
No data available	
<b>Decomposition point / decomposition range</b>	
No data available	
<b>Flash point</b>	
Value	110 °C
Source	supplier
<b>Auto-ignition temperature</b>	
No data available	
<b>Oxidising properties</b>	
No data available	
<b>Explosive properties</b>	
No data available	
<b>Flammability</b>	
No data available	
<b>Lower flammability or explosive limits</b>	
No data available	
<b>Upper flammability or explosive limits</b>	
No data available	
<b>Vapor pressure</b>	
No data available	
<b>Vapor density</b>	
No data available	
<b>Evaporation rate</b>	
No data available	
<b>Relative density</b>	
No data available	
<b>Density</b>	
Value	1.25 - 1.5 g/cm <sup>3</sup>
Reference temperature	20 °C
Source	supplier
<b>Solubility in water</b>	

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

**Viscosity**

Value	2500 - 6000	mPa*s
Type	dynamic	
Source	supplier	

**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, when used as directed.

**10.4 Conditions to avoid**

Heat, open flames and other sources of ignition. Protect from sun.

**10.5 Incompatible materials**

strong oxidising agents

**10.6 Hazardous decomposition products**

None if stored, handled and transported properly. In case of fire: see section 5 .

**SECTION 11: Toxicological information****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	Substance name	CAS no.
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
	Route of exposure	Skin
	Species	mouse

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Method	OECD 429
Source	ECHA
Evaluation	sensitizing

<b>Germ cell mutagenicity</b>
No data available

<b>Reproduction toxicity</b>		
<b>No</b>	<b>Substance name</b>	<b>CAS no.</b>
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
Route of exposure		oral
Species		rats (male/female)
Method		OECD 421
Source		ECHA
Evaluation/classification		May damage fertility.

<b>Carcinogenicity</b>
No data available

<b>NTP Report on Carcinogens (RoC)</b>
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed "known" (to be a human carcinogen) or "RAHC" (reasonably anticipated to be a human carcinogen).

<b>OSHA Standards listing cancer as a health effect (Table VII.6.2)</b>
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as carcinogenic.

<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans</b>			
The product contains following substance(s) classified by the IARC Monographs			
<b>No</b>	<b>Substance name</b>	<b>CAS no.</b>	<b>Group</b>
1	diiron trioxide	1309-37-1	3
2	titanium dioxide	13463-67-7	2B

<b>STOT - single exposure</b>
No data available

<b>STOT - repeated exposure</b>
No data available

<b>Aspiration hazard</b>
No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Toxicity to fish (acute)</b>			
<b>No</b>	<b>Substance name</b>	<b>CAS no.</b>	
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	
LC50		1.4	mg/l
Duration of exposure		96	h
Species	Cyprinus carpio		
Method	OECD 203		
Source	ECHA		

<b>Toxicity to fish (chronic)</b>
No data available

<b>Toxicity to Daphnia (acute)</b>
No data available

<b>Toxicity to Daphnia (chronic)</b>
No data available

<b>Toxicity to algae (acute)</b>
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No data available

**Toxicity to algae (chronic)**

No data available

**12.2 Persistence and degradability****Biodegradability**

No	Substance name	CAS no.
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
Value		0 %
Duration		28 day(s)
Method	OECD 301 F	
Source	ECHA	
Evaluation	The product is not biodegradable.	

**12.3 Bioaccumulative potential****Partition coefficient: n-octanol/water**

No	Substance name	CAS no.
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
log Pow		3.1
Reference temperature		23 °C
Method	OECD 117	
Source	ECHA	

**12.4 Mobility in soil**

No data available.

**12.5 Other adverse effects**

No data available.

**12.6 Other information****Other information**

Do not discharge product unmonitored into the environment.

**SECTION 13: Disposal considerations****13.1 Disposal considerations****Product**

Dispose in accordance with federal, state and local regulations.

**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 accordance with federal, state and local regulations.

**SECTION 14: Transport information****14.1 US DOT (Department of Transportation)**

The product is not subject to DOT 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, pls. see 14.1 - 14.3.

**14.6 Special precautions for user**

No data available.



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## 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 US Federal Regulations

**Toxic Substances Control Act (TSCA)**  
According to the data available and/or specifications supplied by upstream suppliers, all components of this product are on the TSCA Inventory or are exempted from notification requirements.

The following substances have EPA regulatory flags in the TSCA Inventory:

No	Substance name	CAS no.	EPA TSCA Regulatory Flags
1	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	PMN
2	Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and 2-methylprop-2-enoic acid	41637-38-1	XU

#### CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to Table 302.4 "List of Hazardous Substances and Reportable Quantities".

#### Clean Air Act (CAA): Hazardous Air Pollutants (HAPS)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being "Hazardous Air Pollutants".

#### Clean Water Act (CWA) Section 307 (Toxic Pollutants) and Section 311 (Hazardous Substances)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered to be "Hazardous Substances".

#### EPCRA SARA Section 313, Toxic Chemical Release Inventory

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to "SARA Reporting".

#### Emergency Planning & Community Right-to-Know Act (EPCRA) - Sections 302 and 304

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to reporting requirements.

#### Clean Air Act (CAA) - Section 602 Ozone depleting substances

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as ozone depleting substance.

### 15.2 US State Regulations

#### Pennsylvania State Right to Know Hazardous Substance List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	diiron trioxide	1309-37-1
2	titanium dioxide	13463-67-7

#### New Jersey State Right to Know Hazardous Substance List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	diiron trioxide	1309-37-1
2	titanium dioxide	13463-67-7

#### Massachusetts State Right to Know Hazardous Substance List

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered to be "Hazardous Substances".

#### California Code of Regulations Title 8 §339, Hazardous Substances List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	diiron trioxide	1309-37-1

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The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.	type of toxicity
1	titanium dioxide	13463-67-7	cancer

**SECTION 16: Other information, including date of preparation or last revision****16.1 Other information**

No data available.

**16.2 Date of preparation/revision of the SDS**

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**16.3 Department issuing safety data sheet**

UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

**16.4 Conclusions**

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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**16.5 Key / Legend**

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5E - indicates a substance that is the subject of a TSCA section 5(e) order  
5F - indicates a substance that is the subject of a TSCA section 5(f) rule  
ACGIH - American Conference of Governmental Industrial Hygienists  
ATE – Acute Toxicity Estimate  
BOD - Biochemical Oxygen Demand  
CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*;  
CAS - Chemical Abstracts Service  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
CFR - Code of Federal Regulations (US)  
CLP - Classification, Labelling, and Packaging  
DOT - Department of Transportation Commission  
ECHA – European Chemicals Agency  
EC / EL – Effective Concentration / Effective Loading  
EPA - Environmental Protection Agency  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
IBC – Intermediate Bulk Container  
ICAO - International Civil Aviation Organization  
IDL - Ingredient Disclosure List  
IDLH - Immediately Dangerous to Life and Health  
IMDG - International Maritime Dangerous Goods  
IUCRID - International Uniform Chemical Information Database  
Kow - Octanol/water partition coefficient  
LD/LC - Lethal Dose/ Lethal Concentration  
MARPOL – Marine Pollution  
MEL - Maximum Exposure Limits  
NFPA - National Fire Protection Agency  
NIOSH - National Institute for Occupational Safety and Health  
NJTSR - New Jersey Trade Secret Registry  
NOEL/NOEC – No Observed Effect Level / No Observed Effect Concentration  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PEL- Permissible Exposure Limit  
PMN - indicates a commenced Pre Manufacture Notice substance  
RCRA - Resource Conservation and Recovery Act  
S - indicates a substance that is identified in a final Significant New Use Rule  
SARA - Superfund Amendments and Reauthorization Act  
SP - indicates a substance that is identified in a proposed Significant New Use Rule  
STEL - Short-term Exposure Limit  
STOT – Specific Target Organ Toxicity  
T - indicates a substance that is the subject of a final TSCA section 4 test rule or order  
TDG - Transportation of Dangerous Goods  
TLV - Threshold Limit Value  
TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule or order  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average  
UN/NA - United Nations /North American  
US - United States  
VLE - Exposure Limit Value (Mexico)  
VOC – Volatile Organic Compounds  
XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule