

Trade name: VarseoWax® CAD/Cast (REF 41136, 41137)**Current version :** 1.1.0, issued: 21.12.2022**Replaced version:** 1.0.0, issued: 12.05.2020**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****VarseoWax® CAD/Cast (REF 41136, 41137)****1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses of the substance or mixture**

Photopolymer intended for use in the manufacture of burnout, removable prostheses, crowns, bridges, inlays and onlays.

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 BremenTelephone no. +49/ 421/ 2028 – 0
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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 numberFor 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
Skin Sens. 1; H317**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



GHS09

Signal word

Warning

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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
(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Hazard statement(s)

H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Hazard statements (EU)

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

Precautionary statement(s)

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.

2.3 Other hazards

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	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 - 01-2120751202-68	Aquatic Chronic 2; H411 Skin Sens. 1B; H317	>= 25.00 - < 50.00	wt%
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate			
	42594-17-2 255-901-3 - 01-2120051112-76	Aquatic Chronic 2; H411 Skin Sens. 1B; H317	>= 25.00 - < 50.00	wt%
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			
	162881-26-7 423-340-5 015-189-00-5 01-2119489401-38	Aquatic Chronic 4; H413 Skin Sens. 1; H317	< 2.50	wt%
4	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 Skin Sens. 1; H317	< 0.50	wt%
5	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-propenoate			
	55818-57-0 500-130-2 - 01-2119490020-53	Skin Sens. 1; H317	< 0.50	wt%

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

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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. Get medical attention if pain still 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). Seek medical assistance.

After ingestion

Rinse the mouth thoroughly with water. Do not induce vomiting. 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; Dry chemical extinguisher; Water spray jet; Foam

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

Combustible. In the event of fire, the following can be released: Carbon oxides (CO_x); Nitrogen oxides (NO_x); phosphoric compounds

5.3 Advice for firefighters

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

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 collected, handle material as described under the section heading "Disposal considerations".

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

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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).

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. Provide eye wash fountain in work area. Have emergency shower available.

Advice on protection against fire and explosion

Keep away from sources of ignition. Take precautionary measures against static charges.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed in a well-ventilated place.

Requirements for storage rooms and vessels

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

Incompatible products

Do not store together with: explosive substances; 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	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	
	dermal	Long term (chronic)	systemic	1.3	mg/kg/day
	inhalative	Long term (chronic)	systemic	3.3	mg/m ³
2	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			162881-26-7 423-340-5	
	dermal	Long term (chronic)	systemic	3	mg/kg/day
	inhalative	Long term (chronic)	systemic	21	mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	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	
	oral	Long term (chronic)	systemic	0.3	mg/kg/day
	dermal	Long term (chronic)	systemic	0.7	mg/kg/day
	inhalative	Long term (chronic)	systemic	0.6	mg/m ³
2	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			162881-26-7 423-340-5	
	oral	Long term (chronic)	systemic	1.5	mg/kg/day
	dermal	Long term (chronic)	systemic	1.5	mg/kg/day
	inhalative	Long term (chronic)	systemic	5.2	mg/m ³

PNEC values

No	Substance name		CAS / EC no
	ecological compartment	Type	Value

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1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate		72869-86-4 276-957-5
	water	fresh water	0.01 mg/L
	water	Aqua intermittent	0.1 mg/kg
	water	marine water	0.001 mg/L
	water	fresh water sediment	4.56 mg/kg dry weight
	water	marine water sediment	0.46 mg/kg dry weight
	soil	-	0.91 mg/kg dry weight
	sewage treatment plant	-	3.61 mg/L
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate		42594-17-2 255-901-3
	water	fresh water	1.6 µg/L
	water	Aqua intermittent	16 µg/L
	water	marine water	0.16 µg/L
	water	fresh water sediment	0.658 mg/kg dry weight
	water	marine water sediment	0.066 mg/kg dry weight
	soil	-	0.131 mg/kg dry weight
	sewage treatment plant	-	10 mg/L
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide		162881-26-7 423-340-5
	water	fresh water	1 µg/L
	water	Aqua intermittent	1 µg/L
	water	marine water	1 µg/L
	water	fresh water sediment	0.712 mg/kg dry weight
	water	marine water sediment	0.712 mg/kg dry weight
	soil	-	20 mg/kg dry weight
	sewage treatment plant	-	1 mg/L

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

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

Do not empty into drains.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation			
liquid			
Form			
liquid, viscous			
Colour			
yellow			
Odour			
No data available			
pH value			
No data available			
Boiling point / boiling range			
No data available			
Melting point/freezing point			
No data available			
Decomposition temperature			
No data available			
Flash point			
No data available			
Ignition temperature			
No data available			
Flammability			
No data available			
Lower explosion limit			
No data available			
Upper explosion limit			
No data available			
Vapour pressure			
No data available			
Relative vapour density			
No data available			
Relative density			
No data available			
Density			
Value		1.10	g/ml
Source	supplier		
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	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
log Pow		3.39	
Reference temperature		20	°C
Method		OECD 117	
Source		ECHA	

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2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
log Pow		4.54	- 4.64
with reference to		pH 7,3	
Method		OECD 117	
Source		ECHA	
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
log Pow			5.8
Reference temperature			22 °C
with reference to		pH: 8.3	
Method		OECD 117	
Source		ECHA	

Kinematic viscosity			
Value		700	- 1500 mPa*s
Reference temperature			22 °C
Method		Brookfield	
Source		supplier	

Particle characteristics			
No data available			

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, when used as directed.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources.

10.5 Incompatible materials

strong oxidizing agents

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity			
No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
LD50		>	5000 mg/kg bodyweight
Species		rat	
Method		OECD 401	
Source		ECHA	
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
LD50		>	2000 mg/kg bodyweight
Species		rat	
Method		OECD 423	
Source		ECHA	

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3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

Acute dermal toxicity

No	Substance name	CAS no.	EC no.
1	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
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		

Acute inhalational toxicity

No data available

Skin corrosion/irritation

No	Substance name	CAS no.	EC no.
1	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
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Method	OECD 439		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
Species	rabbit		
Method	OECD 404		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Serious eye damage/irritation

No	Substance name	CAS no.	EC no.
1	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
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Method	OECD 437		

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Source	ECHA
Evaluation	non-irritant
Evaluation/classification	Based on available data, the classification criteria are not met.
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7 423-340-5
Species	rabbit
Method	OECD 405
Source	ECHA
Evaluation	non-irritant
Evaluation/classification	Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
Route of exposure		Skin	
Species	mouse		
Method	OECD 429		
Source	ECHA		
Evaluation	sensitizing		
Evaluation/classification	Based on available data, the classification criteria are met.		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Route of exposure		Skin	
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation	sensitizing		
Evaluation/classification	Based on available data, the classification criteria are met.		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
Route of exposure		Skin	
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation	sensitizing		
Evaluation/classification	Based on available data, the classification criteria are met.		

Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
Type of examination	in vitro gene mutation study in bacteria		
Species	Salmonella typhimurium TA98, TA100, TA102, TA1535, TA1537		
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	in vitro gene mutation study in mammalian cells		
Species	Chinese hamster V79 cells		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Type of examination	in vitro gene mutation study in mammalian cells		
Species	Chinese hamster V79 cells		
Method	OECD 476		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	in vitro gene mutation study in bacteria		
Species	Salmonella typhimurium TA98, TA100, TA102, TA1535, TA1537		
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Type of examination	In vitro mammalian cytogeneticity		

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Species	Mouse lymphoma cells
Method	OECD 487
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7 423-340-5
Type of examination	in vitro gene mutation study in bacteria
Species	Salmonella typhimurium / Escherichia coli
Method	OECD 471
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Type of examination	In vitro Mammalian Chromosomal Aberration Test
Species	Human Lymphocyte
Method	OECD 473
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Type of examination	In vitro mammalian cell gene mutation test
Species	Mouse lymphoma cells
Method	OECD 476
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.

Reproduction toxicity

No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
Route of exposure		oral	
Type of examination		Toxicity study	
Species		rat	
Method		OECD 422	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Route of exposure		oral	
Type of examination		Toxicity study	
Species		rat	
Method		OECD 421	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
Route of exposure		oral	
Type of examination		Prenatal Developmental Toxicity Study	
Species		rat	
Method		OECD 414	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
Route of exposure		oral	
Species		rat	
Method		OECD 422	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

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2	(octahydro-4,7-methano-1H-indenediy)bis(methylene) diacrylate	42594-17-2	255-901-3
Route of exposure	oral		
Species	rat		
Method	OECD 407		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
Route of exposure	oral		
Species	rat		
Method	OECD 407		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Aspiration hazard			
No data available			

11.2 Information on other hazards

Endocrine disrupting properties

No data available.

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	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
LC50		10.1	mg/l
Duration of exposure		96	h
Species	Danio rerio		
Method	OECD 203		
Source	ECHA		
2	(octahydro-4,7-methano-1H-indenediy)bis(methylene) diacrylate	42594-17-2	255-901-3
LC50		1.65	mg/l
Duration of exposure		96	h
Species	Danio rerio		
Method	OECD 203		
Source	ECHA		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
LC50		>	90
Duration of exposure			96
Species	Danio rerio		
Method	OECD 203		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Toxicity to fish (chronic)

No data available

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	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
EC50		>	1.2
Duration of exposure			48
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

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2	(octahydro-4,7-methano-1H-indenediy)bis(methylene) diacrylate	42594-17-2	255-901-3
EC50		2.36	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
EC50	>	1175	µg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Toxicity to Daphnia (chronic)

No data available

Toxicity to algae (acute)

No	Substance name	CAS no.	EC no.
1	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
EC50	>	0.68	mg/l
Duration of exposure		72	h
Species	Desmodesmus subspicatus		
Method	OECD 201		
Source	ECHA		
2	(octahydro-4,7-methano-1H-indenediy)bis(methylene) diacrylate	42594-17-2	255-901-3
EC50		1.6	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
EC50	>	260	µg/l
Duration of exposure		72	h
Species	Desmodesmus subspicatus		
Method	OECD 201		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

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	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
Type	aerobic biodegradation		
Value		22	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	not readily biodegradable		
2	(octahydro-4,7-methano-1H-indenediy)bis(methylene) diacrylate	42594-17-2	255-901-3
Type	aerobic biodegradation		
Value		28.1	%

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Duration	28		
Method	OECD 301 F		
Source	ECHA		
Evaluation	Potentially biologically degradable (inherently biodegradable).		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
Type	aerobic biodegradation		
Value	1		%
Duration	28		day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	not readily biodegradable		

Abiotic Degradation			
No	Substance name	CAS no.	EC no.
1	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
Type	Hydrolysis		
Half-life	4		day(s)
pH value	1.2		
Reference temperature	37		°C
Method	OECD 111		
Source	ECHA		
Type	Hydrolysis		
Half-life	4.8		day(s)
pH value	9		
Reference temperature	50		°C
Method	OECD 111		
Source	ECHA		

12.3 Bioaccumulative potential

Bioconcentration factor (BCF)			
No	Substance name	CAS no.	EC no.
1	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
BCF	<	5	
Species	Cyprinus carpio		
Method	OECD 305		
Source	ECHA		

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane 1,16-diyl bismethacrylate	72869-86-4	276-957-5
log Pow	3.39		
Reference temperature	20 °C		
Method	OECD 117		
Source	ECHA		
2	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
log Pow	4.54	-	4.64
with reference to	pH 7,3		
Method	OECD 117		
Source	ECHA		
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5
log Pow	5.8		
Reference temperature	22 °C		
with reference to	pH: 8.3		
Method	OECD 117		
Source	ECHA		

12.4 Mobility in soil

Mobility in soil			
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No	Substance name	CAS no.	EC no.
1	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	255-901-3
log K _{oc}		3.61	
Method		OECD 121	
Source		ECHA	

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

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.

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.

Packaging

Residues 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**

Class	9
Classification code	M6
Packing group	III
Hazard identification no.	90
UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane 1,16-diyl bismethacrylate (octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate
Tunnel restriction code	-
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.
Technical name	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane 1,16-diyl bismethacrylate (octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate
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.

Trade name: VarseoWax® CAD/Cast (REF 41136, 41137)

Current version : 1.1.0, issued: 21.12.2022

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Region: GB

Technical name	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane 1,16-diyl bismethacrylate (octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate
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

To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

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, MIXTURES AND ARTICLES

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

The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	2-methoxypropyl acetate	70657-70-4	274-724-2	75
2	mequinol	150-76-5	205-769-8	75
3	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5	75

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

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.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

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 section.

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

H319

Causes serious eye irritation.

H413

May cause long lasting harmful effects to aquatic life.

Creation of the 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.

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