SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006

VarseoSmile Crown plus

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

1.1. Product identifier

Trade name

VarseoSmile Crown plus

Name of the chemical

Valid for all colours.

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

Relevant identified uses

Resin for 3D printing of definitive single crowns, inlays, onlays and veneers.

1.3. Details of the supplier of the safety data sheet

Manufacturer

BEGO - Bremer Goldschlägerei Wilhelm Herbst GmbH & Co. KG

Address
Wilhelm-Herbst-Str. 1
28359 Bremen
Germany

Telephone
+49/421/2028-0

Email
msds@bego.com

1.4. Emergency telephone number

+49 (0) 551 19240 (English and German 24/7) (GIZ-Nord)

Available outside office hours

Yes

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Reproductive toxicity, hazard category 1B
Hazardous to the aquatic environment — Chronic hazard category 4
Skin sensitisation, hazard category 1

Hazard statements

H317, H360Fd., H413

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H317 May cause an allergic skin reaction.
H360Fd May damage fertility. Suspected of damaging the unborn child
H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements

P201 Obtain special instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water/Soap.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container to in accordance with local regulations..

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Specific concentration limits ATE	Note
Ethoxylated bisphenol A dimethacrylate	41637-38-1 609-946-4 01-2119980659-17 -	≥50 - <70%	Aquatic Chronic 4	H413 - -		-
Methyl α-oxophenylacetate	15206-55-0 239-263-3 01-2120101338-67-xxxx -	1 - <5%	Skin Sens. 1	H317 - -		-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8 278-355-8 01-2119972295-29 015-203-00-X	0.5 - <2.5%	Skin Sens. 1B, Repr. 1B	H317, H360Fd. - -		-

Substance additional information
Substances with national occupational exposure limit(s)

SECTION 4: First aid measures

4.1. Description of first aid measures

Take off immediately all contaminated clothing and wash it before reuse. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

Inhalation
Provide fresh air. Remove victim out of the danger area.

Skin contact
IF ON SKIN: Wash with plenty of water and soap. In case of skin irritation, consult a physician.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

Ingestion
IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Call a physician 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 extinguishing powder , Water spray jet , Foam

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide , Carbon monoxide , Phosphorus compounds

5.3. Advice for firefighters

Special protective equipment for fire-fighters

In case of fire: Wear self-contained breathing apparatus. , Full protection suit
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :
Provide adequate ventilation. Do not inhale vapors.

For emergency responders
Personal protection equipment: see section 8

6.2. Environmental precautions

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Disposal: see section 13

6.4. Reference to other sections

Safe handling: see section 7 , Personal protection equipment: see section 8 , Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

General hygiene

Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Take off contaminated clothing and wash it before reuse. Do not inhale vapors.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and in a well-ventilated place.
Keep/Store only in original container.

Hints on joint storage :
Do not store together with: Oxidizing agent

7.3. Specific end use(s)

No data available

Other

Storage class
Germany : LGK 10-13 non-combustible liquids that cannot be assigned to any of the above storage classes

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	DNEL	Chronic (long term) Inhalation	0.822 mg/m³	Workers	Systemic
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	DNEL	Chronic (long term) Dermal	0.233 mg/kg bw/day	Workers	Systemic
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	DNEL	Chronic (long term) Inhalation	0.145 mg/m³	Consumers	Systemic
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	DNEL	Chronic (long term) Dermal	83.3 µg/kg bw/day	Consumers	Systemic
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	DNEL	Chronic (long term) Oral	83.3 µg/kg bw/day	Consumers	Systemic

PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	PNEC	Freshwater	1.4 µg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	PNEC	Marine water	0.14 µg/l
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	PNEC	Sediment (freshwater)	0.115 mg/kg
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	PNEC	Sediment (marine water)	11.5 µg/kg
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8/278-355-8)	PNEC	Soil	22.2 µg/kg
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Freshwater	0.069 mg/l
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Marine water	0.007 mg/l
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Sewage Treatment Plant	39 mg/l

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Sediment (freshwater)	0.47 mg/kg
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Sediment (marine water)	0.047 mg/kg
Methyl α-oxophenylacetate (15206-55-0/239-263-3)	PNEC	Soil	0.027 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Personal Protective Equipment Symbols



Eye / face protection

Eye glasses with side protection

Hand protection

By short-term hand contact : NBR (Nitrile rubber) Thickness of the glove material : 0,12 mm (30 - 60 min)
long-term : NBR (Nitrile rubber) Thickness of the glove material : 0,2 mm (240 - 480 min)
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Other skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Filtering device (full mask or mouthpiece) with filter: Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m3 (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour
yellow - white

Odour
No data available

Melting point / freezing point
No data available

Boiling point or initial boiling point and boiling range
~ 150 °C

Flammability
No data available

Lower and upper explosion limit
No data available

Flash point
~ 110 °C

Auto-ignition temperature
No data available

Decomposition temperature
No data available

pH
No data available

Kinematic viscosity
No data available

Solubility
No data available

Partition coefficient n-octanol/water
No data available

Vapour pressure
No data available

Density and/or relative density
1,25 - 1,5 g/cm³ (20°C)

Relative vapour density
No data available

Particle characteristics
No data available

9.2. 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.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Store in a well-ventilated place.

10.5. Incompatible materials
Oxidising agent, strong

10.6. Hazardous decomposition products
No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	LD50	> 5000 mg/kg bw	Oral	14 days	rat	OECD 401
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	LD50	> 2000 mg/kg bw	Dermal	24 hours	rat	OECD 402
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LD50	= 6800 - = 10000 mg/kg bw	Oral	14 days	rat	OECD 401

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LC0	-	Inhalation	7 hours	rat	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LD50	> 2000 mg/kg bw	Dermal	24 hours	rat	OECD 402
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LD50	2100 - 3100 mg/kg bw	Intraperitoneal	14 days	mouse	-

Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result	Value / Dose	Duration of exposure	Species
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Not irritating	0.5 g	24 hours	rabbit
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Irritating	0.5 mL	24 hours	rabbit
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Not irritating	0.5 mL	2 hours	rabbit
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Not irritating	0.5 mL	5 minutes	rabbit

Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Value / Dose	Duration of exposure	Species	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Not irritating	56 mg	-	rabbit	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Not irritating	100 µL	24 hours	rabbit	OECD 405

Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Value / Dose	Test type	Species	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Skin sensitising	10 - 50 %	LLNA	mouse	OECD 429
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Not sensitising	100 mmol/L	DPRA	-	OECD 442C

Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result	Value / Dose	Exposure time	Species	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	negative (with and without metabolic activation)	5000 µg/plate	48 h	Bacteria	OECD 471
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	negative (with and without metabolic activation)	5200 µg/plate	48 h	Bacteria	OECD 471

Reproductive toxicity

Product / Substance name CAS / EC no.	Exposure route	Value / Dose	Species	Result	Duration of exposure	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	NOAEL : 150 mg/kg bw/day	rat	Developmental toxicity : Adverse effects observed	15 days	OECD 414
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	NOAEL : 200 mg/kg bw	rat	Parental toxicity : Adverse effects observed	12 weeks	OECD 421
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	NOAEL : 60 mg/kg bw	rat	Reproductive toxicity : Adverse effects observed	12 weeks	OECD 421
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	NOAEL : 200 mg/kg bw	rat	Developmental toxicity : No effects observed	12 weeks	OECD 421
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Oral	NOAEL : 1000 mg/kg bw/day	rat	Reproductive toxicity : No effects observed	-	OECD 422

STOT-repeated exposure

Product / Substance name CAS / EC no.	Exposure route	Target organs	Value / Dose	Species	Result	Exposure time / Exposure frequency	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	-	NOAEL : 100 mg/kg bw/day	rat	Adverse effects observed	3 months (1 times/day , 5 days/week)	OECD 408

Product / Substance name CAS / EC no.	Exposure route	Target organs	Value / Dose	Species	Result	Exposure time / Exposure frequency	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Oral	Liver	LOAEL : 300 mg/kg bw/day	rat	Adverse effects observed	3 months (1 times/day , 5 days/week)	OECD 408
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Oral	-	NOAEL : 1000 mg/kg bw/day	rat	No effects observed	6 weeks (1 times/day , 5 days/week)	OECD 422

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2. Information on other hazards
No data available

SECTION 12: Ecological information

12.1. Toxicity
Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LC50	> 120 mg/L	96 hours	Mortality	Danio rerio	OECD 203
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LC50	> 54.6 mg/L	96 hours	Mortality	Danio rerio	OECD 203
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LC0	> 120 mg/L	96 hours	Mortality	Danio rerio	OECD 203

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	LC0	> 54.6 mg/L	96 hours	Mortality	Danio rerio	OECD 203
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	LC50	= 1.4 mg/L	96 hours	Mortality	Cyprinus carpio	OECD 203
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	LC50	= 1.6 mg/L	96 hours	Mortality	Fish	-

Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 56.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 39.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 40.7 mg/L	72 hours	Yield	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 26.3 mg/L	72 hours	Yield	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 6.99 mg/L	72 hours	Yield	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 3.24 mg/L	72 hours	Yield	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC50	> 2.01 mg/L	72 hours	Growth inhibition	Algae	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC50	> 2.01 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC10	= 1.56 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 94.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 56.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 68.6 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	-

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 39.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 94.4 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	= 68.6 mg/L	72 hours	Growth rate	Pseudokirchneriella subcapitata	OECD 201; EU Method C.3

Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	>= 120 mg/L	48 hours	Immobilisation	Daphnia magna	OECD 202
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	>= 39.6 mg/L	48 hours	Immobilisation	Daphnia magna	OECD 202
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	NOEC	>= 120 mg/L	48 hours	Immobilisation	Daphnia magna	OECD 202
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	NOEC	>= 39.6 mg/L	48 hours	Immobilisation	Daphnia magna	OECD 202

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC50	= 3.53 mg/L	48 hours	Immobilisation	Daphnia magna	OECD 202
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC50	= 3.53 mg/L	-	Immobilisation	Daphnia	-

Micro-/macro organism toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC10	= 390 mg/L	3 hours	Respiration	Activated sludge	OECD 209
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC20	= 540 mg/L	3 hours	Respiration	Activated sludge	OECD 209
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC50	> 1000 mg/L	3 hours	Respiration	Activated sludge	OECD 209
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	EC80	> 1000 mg/L	3 hours	Respiration	Activated sludge	OECD 209
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC20	> 1000 mg/L	180 minutes	Respiration	Activated sludge	OECD 209

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC80	> 1000 mg/L	180 minutes	Respiration	Activated sludge	OECD 209
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	EC50	> 1000 mg/L	180 minutes	Respiration	Activated sludge	OECD 209

12.2. Persistence and degradability

Persistence and degradability

Product / Substance name CAS / EC no.	Type of test	Duration	Result	Exposure route	Degradation	Method / Guideline
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Ready biodegradability	28 days	Readily biodegradable	Freshwater	90 - 100% (28 days)	OECD 301 B
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Simulation	-	Readily biodegradable	Freshwater	-	-
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Hydrolysis	-	Hydrolytically unstable	Freshwater	-	OECD 111
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Simulation	-	Readily biodegradable	Soil	-	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Photodegradation	-	-	Air	-	-

Product / Substance name CAS / EC no.	Type of test	Duration	Result	Exposure route	Degradation	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Ready biodegradability	28 days	Not readily biodegradable	Freshwater	0 - 10% (28 days)	OECD 301 F
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Simulation	62 days	Not persistent	Freshwater	83.2 - 90.6% (62 days)	OECD 309
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Simulation	62 days	Not persistent	Freshwater	-	OECD 309
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Simulation	-	-	Freshwater	-	OECD 309

12.3. Bioaccumulative potential

Bioaccumulative potential

Product / Substance name CAS / EC no.	Bioconcentration factor (BCF)	Type of test	Duration	Result	Duration of exposure	Species	Temperature	Method / Guideline
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	= 18 - = 72 L/kg	Aqueous bioconcentration factor	8 weeks	Low bioaccumulation	8 weeks	Cyprinus carpio	25	JIS K 0102-1986, 71

12.4. Mobility in soil

Mobility

Product / Substance name CAS / EC no.	KOC	Mobility	Remark
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	784.8 L/kg	Moderate mobility	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	-	Moderate mobility	Mackay Level I

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Product / Substance name CAS / EC no.	PBT / vPvB
Methyl α-oxophenylacetate 15206-55-0 / 239-263-3	Not PBT / Not vPvB
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 75980-60-8 / 278-355-8	Not PBT / Not vPvB

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

Disposal considerations

The waste code has to be identified in agreement with the disposal company or the competent authority.
Delivery to an approved waste disposal company.

Packaging

Non-contaminated packages may be recycled.
Local disposal regulations : Observe in addition any national regulations!

SECTION 14: Transport information

14.1. UN number

Not applicable

14.2. UN proper shipping name
Not applicable

14.3. Transport hazard class(es)
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Not applicable

14.6. Special precautions for user
Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
No data available

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE - Acute Toxicity Estimate
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSR - Chemical Safety Report
DMEL - Derived Minimum Effect Level
DNEL - Derived No Effect Level
EC50 - Half Maximal Effective Concentration
ECHA - European Chemicals Agency
GHS - Globally Harmonized System
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LoW - List of Wastes
OEL - Occupational Exposure Limit
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Environmental Concentration
PNEC - Predicted No Effect Concentration(s)
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
SCBA - Self-Contained Breathing Apparatus
STOT - Specific Target Organ Toxicity
SVHC - Substances of Very High Concern
UFI - Unique Formula Identifier
vPvB - Very Persistent and Very Bioaccumulative

References to key literature and data sources
Key literature references and sources for data

European Union
according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 453/2010) , (EG) Nr. 1272/2008 (CLP)
2000/39/EC , 2006/15/EC , 2009/161/EU , 2017/164/EU
National regulations Occupational exposure limit values
Land transport (ADR/RID)
Sea transport (IMDG)
Air transport (ICAO-TI / IATA-DGR)

USA:
Key / Reference Literature - OSHA Hazard Communication Standard, 29 CFR 1910.1200. - Toxic Substances Control Act (TSCA) Inventory. - Emergency Planning and Community Right-to-Know Act (EPCRA/SARA Title III). - Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). - California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). - IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C: Arsenic, Metals, Fibres and Dusts. - National Toxicology Program (NTP), Report on Carcinogens (RoC), latest edition. - ACGIH® Threshold Limit Values (TLVs®) and Biological Exposure Indices (BEIs®). - NIOSH Pocket Guide to Chemical Hazards. - Registry of Toxic Effects of Chemical Substances (RTECS).

Australia:
Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 7th Revised Edition (GHS Rev. 7)
Work Health and Safety (WHS) Regulations 2011 (Chapter 7 – Hazardous Chemicals)
Requirements for classification, labelling and Safety Data Sheets (SDS) for hazardous chemicals in the workplace
Industrial Chemicals Act 2019 – Australian Industrial Chemicals Introduction Scheme (AICIS)
Safe Work Australia – Code of Practice: Preparation of Safety Data Sheets

Evaluation methods for classification
according to Regulation (EC) No. 1907/2006 (REACH)
Physical hazards : On basis of test data. in accordance with Annex I, Part 2
Environmental hazards , health hazards : Calculation method. in accordance with Annex I, Parts 3, 4 and 5

USA:
OSHA Hazard Communication Standard (HCS 2012) 29 CFR § 1910.1200
in accordance with Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 7th Revised Edition (GHS Rev. 7)

Phrase meaning
Skin Sens. 1 - Skin sensitisation, hazard category 1
Repr. 1B - Reproductive toxicity, hazard category 1B
Aquatic Chronic 4 - Hazardous to the aquatic environment — Chronic hazard category 4
Skin Sens. 1B - Skin sensitisation, hazard category 1, sub-category 1B
H317 May cause an allergic skin reaction.
H360Fd May damage fertility. Suspected of damaging the unborn child
H413 May cause long lasting harmful effects to aquatic life.