

Trade name: FotoCast2

Substance number: 7060

Version: 1 / GB

Date revised: 15.05.2023

Replaces Version: - / GB

Print date: 15.05.2023

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

1.1. Product identifier

FotoCast2

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

Use of the substance/preparation

Light-curing material for the production of shells/forms by means of 3D printing processes

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Otoplastik GmbH

Max-Planck-Straße 31

59423 Unna

Telephone no.

+49 2303 8807-0

Fax no.

+49 2303 8807-29

Information provided

Department Research & Development: Fax: +49 2303 8807-562

by / telephone

E-mail address of

sicherheitsdatenblatt@dreve.de

person responsible

for this SDS

1.4. Emergency telephone number

Henkel Fire Department / 24h-Emergency-Contact-No.: +49 211 797-3350

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Skin Sens. 1A H317

Aquatic Chronic 4 H413

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Warning

Hazard statements



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H317 May cause an allergic skin reaction.
 H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P501.1 Dispose of contents/container to industrial incineration plant.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains Tetramethylene dimethacrylate; Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

2.3. Other hazards

No special hazards have to be mentioned.

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous ingredients****Bisphenol A, ethoxylated, dimethacrylate**

CAS No.	41637-38-1			
EINECS no.	609-946-4			
Registration no.	01-2119980659-17			
Concentration	>= 50			%
Classification (Regulation (EC) No. 1272/2008)	Aquatic Chronic 4			H413

Tetramethylene dimethacrylate

CAS No.	2082-81-7			
EINECS no.	218-218-1			
Registration no.	01-2119967415-30			
Concentration	>= 10	< 25		%
Classification (Regulation (EC) No. 1272/2008)	Skin Sens. 1B			H317

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

CAS No.	162881-26-7			
EINECS no.	423-340-5			
Registration no.	01-2119489401-38			
Concentration	>= 1	< 10		%
Classification (Regulation (EC) No. 1272/2008)	Skin Sens. 1A			H317
	Aquatic Chronic 4			H413

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid

After inhalation

Ensure supply of fresh air. Remove affected person from danger area. Seek medical advice immediately.

After skin contact

Wash off immediately with soap and water. Seek medical advice immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Take medical treatment.

After ingestion

Call in a physician immediately and show him the Safety Data Sheet. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

4.2. Most important symptoms and effects, both acute and delayed

Until now no symptoms known so far.

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO₂, powders, water spray/mist, Extinguishing measures to suit surroundings

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations. Observe manufacturer's / distributor's instructions.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away sources of ignition. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with skin, eyes and clothing. Use personal protective clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Pick up rest with suitable absorbent materials. Do not pick up with the help of saw-dust or other combustible substances. Clean contaminated floors and objects thoroughly, observing environmental regulations. Containers in which spilt substance has been collected must be adequately labelled. Dispose of as prescribed.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid formation of aerosols. Avoid impact, friction and electro-static loading; risk of ignition!. Keep container tightly closed.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition. No smoking. Take action to prevent static discharges. Avoid impact and friction. Use only explosion-proof equipment. Keep away from combustible material. Wear shoes with conductive soles.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Do not store together with foodstuffs. Do not store with strong oxidizing agents.

Further information on storage conditions

Keep under lock and key or accessible only to specialists or people who are authorized. Keep container tightly closed and in a well-ventilated place. Keep in a cool place

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

Contains no substances with occupational exposure limit values.



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Derived No/Minimal Effect Levels (DNEL/DMEL)**Tetramethylene dimethacrylate**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	14,5	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	4,2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,3	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	2,5	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,5	mg/kg

Bisphenol A, ethoxylated, dimethacrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3,52	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	



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Mode of action	Systemic effects	
Concentration	0,87	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,5	mg/kg

Predicted No Effect Concentration (PNEC)**Tetramethylene dimethacrylate**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,043	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,004	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,098	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	2	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	3,12	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,312	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,573	mg/kg

8.2. Exposure controls**General protective and hygiene measures**

Do not smoke during work time. Hold emergency shower available. Hold eye wash fountain available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Take off immediately all contaminated clothing. Do not eat or drink during work time. Storage of foodstuffs in work rooms is forbidden. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.



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Respiratory protection

Do not inhale vapours; Use suitable respiratory protective device in case of insufficient ventilation

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Hand protection must comply with EN 374.

Appropriate Material Butyl rubber

Eye protection

Safety glasses

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	liquid	
Colour	colourless	
Odour	characteristic	
Melting point		
Remarks	not determined	
Freezing point		
Remarks	not determined	
Boiling point or initial boiling point and boiling range		
Value	211	°C
Flammability		
evaluation	not determined	
Upper and lower explosive limits		
Remarks	not determined	
Flash point		
Value	139	°C
Method	closed cup	
Ignition temperature		
Remarks	not determined	
Decomposition temperature		
Remarks	not determined	
pH value		
Remarks	not determined	
Viscosity		
Remarks	not determined	
Solubility(ies)		
Remarks	not determined	
Partition coefficient n-octanol/water (log value)		
Remarks	not determined	



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Vapour pressure

Remarks not determined

Density and/or relative densityValue 1,11 g/cm³
Temperature 20 °C**Relative vapour density**

Remarks not determined

9.2. Other information**Odour threshold**

Remarks not determined

Evaporation rate (ether = 1) :

Remarks not determined

Solubility in water

Remarks virtually insoluble

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

No hazardous reactions known.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Protect from heat and direct sunlight

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Irritant gases/vapours

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**

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



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Acute oral toxicity (Components)**Tetramethylene dimethacrylate**

Species	rat		
LD50		10066	mg/kg
Method	OECD 401		

Bisphenol A, ethoxylated, dimethacrylate

Species	rat		
LD50	>	2000	mg/kg

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 401		

Acute dermal toxicity

Remarks	Based on available data, the classification criteria are not met.
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Acute dermal toxicity (Components)**Bisphenol A, ethoxylated, dimethacrylate**

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

Acute inhalational toxicity

Remarks	Based on available data, the classification criteria are not met.
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Skin corrosion/irritation

Remarks	Based on available data, the classification criteria are not met.
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Serious eye damage/irritation

Remarks	Based on available data, the classification criteria are not met.
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Sensitization

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

Sensitization (Components)**Tetramethylene dimethacrylate**

Route of exposure	dermal
Species	mouse
evaluation	sensitizing
Method	OECD 429

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Route of exposure	dermal
Species	guinea pig
evaluation	sensitizing
Method	OECD 406

Subacute, subchronic, chronic toxicity

Remarks	not determined
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Mutagenicity

Remarks	Based on available data, the classification criteria are not met.
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Reproductive toxicity

Remarks	Based on available data, the classification criteria are not met.
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Carcinogenicity

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

Specific Target Organ Toxicity (STOT)**Single exposure**

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

Repeated exposure

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

Aspiration hazard

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

11.2 Information on other hazards**Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

Other information

No toxicological data are available.

SECTION 12: Ecological information**12.1. Toxicity****General information**

not determined

Fish toxicity (Components)**Tetramethylene dimethacrylate**

Species	golden orfe (<i>Leuciscus idus</i>)		
LC50	32,5		mg/l
Duration of exposure	48	h	
Method	DIN 38412 / Part 15		
Remarks	Test conducted with a similar formulation.		

Bisphenol A, ethoxylated, dimethacrylate

Species	rainbow trout (<i>Oncorhynchus mykiss</i>)		
LC50	> 100		mg/l
Remarks	Test conducted with a similar formulation.		

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	zebra fish (<i>Brachydanio rerio</i>)		
LC50	> 90		µg/l
Duration of exposure	96	h	
Method	OECD 203		

Daphnia toxicity (Components)**Tetramethylene dimethacrylate**

Species	Daphnia magna		
EC10	7,51		mg/l
Duration of exposure	21	d	
Method	OECD 211		

Bisphenol A, ethoxylated, dimethacrylate

Species	Daphnia magna		
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EC50	>	100		mg/l
Duration of exposure		48	h	
Remarks	Test conducted with a similar formulation.			

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	Daphnia magna			
EC50	>	1175		µg/l
Duration of exposure		48	h	
Method	OECD 202			

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	Daphnia magna			
NOEC	>=	8,1		µg/l
Duration of exposure		21	d	
Method	OECD 211			

Algae toxicity (Components)**Tetramethylene dimethacrylate**

Species	Scenedesmus subspicatus			
EC50		9,79		mg/l
Duration of exposure		72	h	
Method	OECD 201			

Bisphenol A, ethoxylated, dimethacrylate

Species	Pseudokirchneriella subcapitata			
EC50	>	100		mg/l
Duration of exposure		72	h	
Method	OECD 201			
Remarks	Test conducted with a similar formulation.			

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	Scenedesmus subspicatus			
EC50	>	260		µg/l
Duration of exposure		72	h	
Method	OECD 201			

Bacteria toxicity (Components)**Tetramethylene dimethacrylate**

Species	activated sludge			
NOEC		20		mg/l
Duration of exposure		28	d	

Bisphenol A, ethoxylated, dimethacrylate

Species	activated sludge			
NOEC		14,3		mg/l
Duration of exposure		28	d	
Remarks	Test conducted with a similar formulation.			

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Species	activated sludge			
EC50	>	100		mg/l
Duration of exposure		3	h	
Method	OECD 209			

12.2. Persistence and degradability**General information**

not determined

Biodegradability (Components)**Tetramethylene dimethacrylate**

Value	84	%
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Duration of test evaluation 28 d
Readily biodegradable (according to OECD criteria)

Bisphenol A, ethoxylated, dimethacrylate

Value 24 %

Duration of test evaluation 28 d
readily degradable

Remarks Test conducted with a similar formulation.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Value 1 %

Duration of test evaluation 28 d
not degradable**12.3. Bioaccumulative potential****General information**

not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

Octanol/water partition coefficient (log Pow) (Components)**Tetramethylene dimethacrylate**log Pow 3,1
Temperature 20 °C**Bisphenol A, ethoxylated, dimethacrylate**

log Pow 4,39

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

log Pow 5,8

12.4. Mobility in soil**General information**

not determined

12.5. Results of PBT and vPvB assessment**General information**

not determined

Results of PBT and vPvB assessmentThe product contains no PBT substances
The product contains no vPvB substances.**12.6 Endocrine disrupting properties****Endocrine disrupting properties with respect to the environment**

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects**General information**

not determined

General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

SECTION 13: Disposal considerations



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13.1. Waste treatment methods

Disposal recommendations for the product

Must not be disposed together with household garbage.

Dispose of waste according to applicable legislation.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off as product waste.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number or ID number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)		-	-
Label			
14.4. Packing group		-	-

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification (Regulation (EC) No. 1272/2008)

Skin Sens. 1A

H317

Calculation method

Aquatic Chronic 4

H413

Calculation method

Hazard statements listed in Chapter 2/3

H317

May cause an allergic skin reaction.

H413

May cause long lasting harmful effects to aquatic life.

CLP categories listed in Chapter 2/3



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Aquatic Chronic 4

Skin Sens. 1A

Skin Sens. 1B

Hazardous to the aquatic environment, chronic, Category 4

Skin sensitization, Category 1A

Skin sensitization, Category 1B

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.