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

1.1. Product identifier

NanoScreen

This substance/mixture contains components in nanoform

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

Use of the substance/preparation

Light-curing lacquer for earmolds

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Otoplastik GmbH
Max-Planck-Straße 31
DE-59423 Unna

Telephone no.	+49 2303 8807-0
Fax no.	+49 2303 8807-29
Information provided by / telephone	Department Research & Development: Fax: +49 2303 8807-562
E-mail address of person responsible for this SDS	sicherheitsdatenblatt@dreve.com

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)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317
Repr. 1B	H360Fd.
STOT SE 3	H335
Aquatic Chronic 3	H412

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

Danger

Hazard statements ***

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H360Fd.	May damage fertility. Suspected of damaging the unborn child.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.

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

contains 2-Propenoic acid, reaction products with pentaerythritol; Methyl methacrylate, monomer,stabilized; Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Supplemental information

Further supplemental information ***

Restricted to professional users

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 ***

Methyl methacrylate, monomer,stabilized

CAS No.	80-62-6				
EINECS no.	201-297-1				
Registration no.	01-2119452498-28				
Concentration	>=	25	<	50	%
Classification (Regulation (EC) No. 1272/2008)					
	Flam. Liq. 2	H225			
	Skin Irrit. 2	H315			

Skin Sens. 1	H317
STOT SE 3	H335

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note D

Propan-2-ol

CAS No. 67-63-0
EINECS no. 200-661-7
Registration no. 01-2119457558-25
Concentration >= 10 < 20 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 2	H225
Eye Irrit. 2	H319
STOT SE 3	H336

2-Propenoic acid, reaction products with pentaerythritol

CAS No. 1245638-61-2
EINECS no. 629-850-6
Registration no. 01-2119490003-49
Concentration >= 3 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317
Aquatic Chronic 2	H411

ATE oral 540 mg/kg

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

CAS No. 75980-60-8
EINECS no. 278-355-8
Registration no. 01-2119972295-29
Concentration >= 2,5 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Repr. 1B	H360Fd.
Skin Sens. 1B	H317
Aquatic Chronic 2	H411

Supplemental information

The substance is contained in the Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).

Hydroxycyclohexyl phenyl ketone

CAS No. 947-19-3
EINECS no. 213-426-9
Registration no. 01-2119457404-40
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Aquatic Chronic 3	H412

Silica, colloidal

CAS No. 112926-00-8
EINECS no. 601-214-2
Concentration >= 3 < 6 %

Name of set of nanoform Nano particles

10-15 nm

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

Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

After skin contact

After contact with skin, wash immediately with plenty of water and soap. Consult a doctor if skin irritation persists.

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.

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

Exposure limit values

Methyl methacrylate, monomer,stabilized

Value			50	ppm(V)
Short term exposure limit			100	ppm(V)

Methyl methacrylate, monomer,stabilized

Value	208	mg/m³	50	ppm(V)
Short term exposure limit	416	mg/m³	100	ppm(V)

Propan-2-ol

Value	999	mg/m³	400	ppm(V)
Short term exposure limit	1250	mg/m³	500	ppm(V)

Biological limit values

Propan-2-ol

List	BGW (TRGS 903)	
Value	25	mg/l
Parameter	Acetone	
Testing material	Whole blood (B)	
Test date	End of exposure or end of shift (b)	
Source	DFG	

Propan-2-ol

List	BGW (TRGS 903)	
Value	25	mg/l
Parameter	Acetone	
Testing material	Urine (U)	
Test date	End of exposure or end of shift (b)	
Source	DFG	

Other information

Contains no substances with occupational exposure limit values.

Derived No/Minimal Effect Levels (DNEL/DMEL)

Methyl methacrylate, monomer,stabilized

Reference substance	Methyl methacrylate, monomer,stabilized	
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	348,4	mg/m³

	Methyl methacrylate, monomer,stabilized	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	208	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Lifetime	
Route of exposure	inhalative	
Concentration	416	mg/m³

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	13,67	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Local effects	
Concentration	1,5	mg/cm²

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	74,3	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	104	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Concentration	208	mg/m³

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	8,2	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	Local effects	
Concentration	1,5	mg/cm²

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	8,2	mg/kg/d

Propan-2-ol

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	888	mg/kg/d

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	500	mg/m³

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	319	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	89	mg/m³

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	26	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1000	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	178	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	51	mg/kg

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Concentration	0,233	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	0,145	mg/m³

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	0,083	mg/kg/d

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	0,083	mg/kg/d

Hydroxycyclohexyl phenyl ketone

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	4,93	mg/m³

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	1,4	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Concentration	0,87	mg/m³

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	0,5	mg/kg/d

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/d

Predicted No Effect Concentration (PNEC)

Methyl methacrylate, monomer,stabilized

Reference substance	Methyl methacrylate, monomer,stabilized	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,94	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,094	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	1,48	mg/kg
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	10,2	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Man via the environment	
Concentration	8,2	mg/kg/d
Type of value	PNEC	
Type	Marine sediment	
Concentration	1,2	mg/kg

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value	PNEC	
Type	Saltwater	
Concentration	0,14	µg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,115	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,0115	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,0222	mg/kg

2-Propenoic acid, reaction products with pentaerythritol

Type of value	PNEC	
Type	Freshwater	
Concentration	0,003	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	1,73	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,173	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	0,34	mg/kg

Hydroxycyclohexyl phenyl ketone

Type of value	PNEC	
Type	Freshwater	
Concentration	30	µg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	3	µg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,356	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,036	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,054	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.

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, clear		
Odour	characteristic		
Melting point			
Remarks	not determined		
Freezing point			
Remarks	not determined		
Boiling point or initial boiling point and boiling range			
Value	>	100	°C
Flammability			
evaluation	Not applicable		
Upper and lower explosive limits			
Lower explosion limit		2,1	%(V)
Upper explosion limit		12,5	%(V)
Flash point			
Value		10	°C
Method	closed cup		
Auto-ignition temperature			
Value		430	°C
Decomposition temperature			
Remarks	not determined		
Self Accelerating Decomposition / Polymerization Temperature (SADT/SAPT)			
Value	>	50	°C
pH value			
Remarks	not determined		
Viscosity			
Remarks	not determined		
Solubility(ies)			
Remarks	not determined		

Partition coefficient n-octanol/water (log value)

Remarks	not determined

Vapour pressure

Value	47		hPa
Temperature	20	°C	

Density and/or relative density

Value	1,03		g/cm³
Temperature	20	°C	

Relative vapour density

Remarks	not determined

9.2. Other information

Odour threshold

Remarks	not determined

Evaporation rate

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

ATE	8.878,00	mg/kg
	15	
Method	calculated value according to GHS (e.g see UN GHS)	

Acute oral toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rat	
LD50	appr. 7900	mg/kg

Propan-2-ol

Species	rat	
LD50	5840	mg/kg
Method	OECD 401	

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	rat	
LD50	> 5000	mg/kg
Method	OECD 401	

2-Propenoic acid, reaction products with pentaerythritol

Species	rat	
LD50	540	mg/kg
Method	OECD 401	

Silica, colloidal

LD50	> 2000	mg/kg

Hydroxycyclohexyl phenyl ketone

Species	rat	
LD50	> 2500	mg/kg
Method	OECD 401	

Acute dermal toxicity

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

Acute dermal toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rabbit	
LD50	> 5000	mg/kg
Method	OECD 402	

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	rat	
LD50	> 2000	mg/kg
Method	OECD 402	

2-Propenoic acid, reaction products with pentaerythritol

Species	rabbit	
LD50	> 2000	mg/kg
Method	OECD 402	

Silica, colloidal

LD50	> 2000	mg/kg

Hydroxycyclohexyl phenyl ketone

Species	rat	
LD50	> 5000	mg/kg

Method	OECD 402

Acute inhalational toxicity

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

Acute inhalative toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	rat		
LC50	29,8		mg/l
Duration of exposure	4	h	
Administration/Form	Vapors		

Propan-2-ol

Species	rat		
LC50	> 10000		ppm(V)
Duration of exposure	6	h	
Administration/Form	Vapors		
Method	OECD 403		

Hydroxycyclohexyl phenyl ketone

Species	rat		
LC50	> 1000		mg/m³
Duration of exposure	4	h	
Administration/Form	Dust/Mist		
Method	OECD 403		

Skin corrosion/irritation

evaluation	irritant
Remarks	The classification criteria are met.

Skin corrosion/irritation (Components)

Methyl methacrylate, monomer,stabilized

Species	Human
evaluation	irritant

2-Propenoic acid, reaction products with pentaerythritol

Species	rabbit
evaluation	irritant
Method	OECD 404

Serious eye damage/irritation

evaluation	corrosive
Remarks	The classification criteria are met.

Serious eye damage/irritation (Components)

Propan-2-ol

Species	rabbit
evaluation	irritant
Method	OECD 405

2-Propenoic acid, reaction products with pentaerythritol

Species	rabbit
evaluation	corrosive
Method	OECD 405

Sensitization

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

Sensitization (Components)

Methyl methacrylate, monomer,stabilized

Route of exposure	dermal

Species	mouse
evaluation	sensitizing
Method	OECD 429

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Route of exposure	dermal
Species	mouse
evaluation	sensitizing
Method	OECD 429

2-Propenoic acid, reaction products with pentaerythritol

Species	guinea pig
evaluation	non-sensitizing
Method	OECD 406

2-Propenoic acid, reaction products with pentaerythritol

Species	Human
evaluation	Possible sensitization potential with human beings.

Subacute, subchronic, chronic toxicity

Remarks: not determined

Mutagenicity

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

Reproductive toxicity

Remarks: The classification criteria are met.

Reproduction toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Route of exposure	oral		
Species	rat		
Dose		150	mg/kg/d
Duration of exposure		14	d
evaluation	Suspected of damaging the unborn child.		
Source	Manufacturer's data		

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Route of exposure	oral		
Species	rat		
Dose		60	mg/kg/d
Duration of exposure	appr.	127	d
evaluation	May damage fertility.		
Source	Manufacturer's data		

Carcinogenicity

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

Specific Target Organ Toxicity (STOT)

Single exposure

Remarks	The classification criteria are met.
evaluation	May cause respiratory irritation.

Repeated exposure

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

Specific Target Organ Toxicity (STOT) (Components)

Methyl methacrylate, monomer,stabilized

Single exposure

evaluation	May cause respiratory irritation. Route of exposure inhalative

Propan-2-ol

Single exposure

evaluation: May cause drowsiness or dizziness.
Organs: Nervous system

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)

Methyl methacrylate, monomer,stabilized

Species	rainbow trout (Oncorhynchus mykiss)		
LC50	85		mg/l
Duration of exposure	96	h	

Methyl methacrylate, monomer,stabilized

Species	zebra fish (Brachydanio rerio)		
NOEC	9,4		mg/l
Duration of exposure	35	d	
Method	OECD 210		

Propan-2-ol

Species	Fathead minnow (Pimephales promelas)		
LC50	9640		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	carp (Cyprinus carpio)		
LC50	1,4		mg/l
Duration of exposure	96	h	
Method	OECD 203		

2-Propenoic acid, reaction products with pentaerythritol

Species	carp (Cyprinus carpio)		
LC50	3,2		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Silica, colloidal

Species	zebra fish (Brachydanio rerio)		
LC50	> 100		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Hydroxycyclohexyl phenyl ketone

Species	zebra fish (Brachydanio rerio)	
LC50	24	mg/l
Duration of exposure	96 h	
Method	Regulation (EC) No. 440/2008, Annex, C.1	

Hydroxycyclohexyl phenyl ketone

Species	Fathead minnow (Pimephales promelas)	
NOEC	4,6	mg/l
Duration of exposure	32 d	
Method	OECD 210	

Daphnia toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	Daphnia magna	
EC50	69	mg/l
Duration of exposure	48 h	

Methyl methacrylate, monomer,stabilized

Species	Daphnia magna	
NOEC	37	mg/l
Duration of exposure	21 d	
Method	OECD 211	

Propan-2-ol

Species	Daphnia magna	
LC50	> 10000	mg/l
Duration of exposure	24 h	
Method	OECD 202	

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Daphnia magna	
EC50	3,53	mg/l
Duration of exposure	48 h	
Method	OECD 202	

2-Propenoic acid, reaction products with pentaerythritol

Species	Daphnia magna	
EC50	13	mg/l
Duration of exposure	48 h	
Method	OECD 202	

Silica, colloidal

Species	Daphnia magna	
EC50	> 2000	mg/l
Duration of exposure	24 h	
Method	OECD 202	

Hydroxycyclohexyl phenyl ketone

Species	Daphnia magna	
EC50	53,9	mg/l
Duration of exposure	48 h	
Method	OECD 202	

Hydroxycyclohexyl phenyl ketone

Species	Daphnia magna	
NOEC	0,3	mg/l
Duration of exposure	21 d	
Method	OECD 211	

Algae toxicity (Components)

Methyl methacrylate, monomer,stabilized

Species	Pseudokirchneriella subcapitata

EC50	>	110		mg/l
Duration of exposure		72	h	
Method	OECD 201			

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Pseudokirchneriella subcapitata			
EC50	>	2,01		mg/l
Duration of exposure		72	h	
Method	OECD 201			

2-Propenoic acid, reaction products with pentaerythritol

Species	Pseudokirchneriella subcapitata			
EL50		33		mg/l
Duration of exposure		96	h	
Method	OECD 201			

Silica, colloidal

Species	Desmodesmus subspicatus			
EC50	>	173		mg/l
Duration of exposure		72	h	
Method	OECD 201			

Hydroxycyclohexyl phenyl ketone

Species	Desmodesmus subspicatus			
EC50		14,4		mg/l
Duration of exposure		72	h	
Method	OECD 201			

Bacteria toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	activated sludge			
EC50	>	1000		mg/l
Duration of exposure		3	h	
Method	OECD 209			

2-Propenoic acid, reaction products with pentaerythritol

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

Silica, colloidal

EC50	>	1000		mg/l
Duration of exposure		3	h	
Method	OECD 209			

Hydroxycyclohexyl phenyl ketone

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

12.2. Persistence and degradability

General information

not determined

Biodegradability (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Value	0	to	10	%
Duration of test	28	d		
evaluation	not readily degradable			

2-Propenoic acid, reaction products with pentaerythritol

Value	6	to	14	%

Duration of test	28	d
evaluation	not readily degradable	

Methyl methacrylate, monomer,stabilized

Value	94	%
Duration of test	14	d
evaluation	Readily biodegradable (according to OECD criteria)	
Method	OECD 301 C	

Propan-2-ol

Value	53	%
Duration of test	5	d
evaluation	Readily biodegradable (according to OECD criteria)	
Method	OECD 301B / ISO 9439 / EEC 84/449 C5	

Silica, colloidal

Remarks	Inorganic product, cannot be eliminated from the water by biological purification processes.

Hydroxycyclohexyl phenyl ketone

Value	80	%
Duration of test	28	d
evaluation	Readily biodegradable (according to OECD criteria)	

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)

Methyl methacrylate, monomer,stabilized

log Pow	1,38	
Temperature	20	°C
Method	OECD 107	

Propan-2-ol

log Pow	0,05	
Temperature	25	°C

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

log Pow	3,1	
Temperature	23	°C

2-Propenoic acid, reaction products with pentaerythritol

log Pow	3,11

12.4. Mobility in soil

General information

not determined

Mobility in soil (Components)

Propan-2-ol

Mobile in soils

Methyl methacrylate, monomer,stabilized

Immobile

12.5. Results of PBT and vPvB assessment

General information

not determined

Results of PBT and vPvB assessment

The product contains no PBT substances
The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

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

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	1247	1247	1247
14.2. UN proper shipping name	METHYL METHACRYLATE MONOMER, STABILIZED, Solution	METHYL METHACRYLATE MONOMER, STABILIZED, Solution	METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 l	1 l	
Transport category	2		
14.5. Environmental hazards	-	-	-
Tunnel restriction code	D/E		

SECTION 15: Regulatory information

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

Restriction according to annex XVII to regulation (EU) No 1907/2006

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 3

Ingredients with restrictions according to Annex XVII Regulation (EU) No. 1907/2006

Methyl methacrylate, monomer,stabilized

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 3

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 40

The product is subject to restrictions in accordance with Annex XVII of Regulation (EU) No. 1907/2006: Entry-No. 75

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

The product is subject to restrictions in accordance with Annex XVII of Regulation (EU) No. 1907/2006: Entry-No. 75

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)

Flam. Liq. 2	H225	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 1B	H360Fd.	Calculation method
STOT SE 3	H335	Calculation method
Aquatic Chronic 3	H412	Calculation method

Hazard statements listed in Chapter 2/3

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360Fd.	May damage fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

CLP categories listed in Chapter 2/3

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

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.