

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## Carsystem UV Filler Spray

Version		Revision Date:	Date of last issue: 30.05.2023
1.1	DE / EN	23.11.2023	Date of first issue: 30.05.2023

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

#### 1.1 Product identifier

Trade name : Carsystem UV Filler Spray

Product code : 159.169

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

Recommended restrictions : Industrial use, professional use on use

#### 1.3 Details of the supplier of the safety data sheet

Company : JASA AG  
Müslistrasse 43  
8957 Spreitenbach  
Schweiz  
  
info@jasa-ag.ch, www.jasa-ag.ch

Telephone : +41 (0)44 431 60 70  
Telefax : +41 (0)44 432 63 17

**Responsible Department** : Productmanagement, Tel: +41 (0)44 431 60 70, sds@jasa-ag.ch

#### 1.4 Emergency telephone

Telephone : Tox Info Suisse (STIZ), Tel: 145

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361d: Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements :  
H222 Extremely flammable aerosol.  
H229 Pressurised container: May burst if heated.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : Buildup of explosive mixtures possible without sufficient ventilation.

Precautionary Statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.

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P260 Do not breathe spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

### Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

### Disposal:

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

### Hazardous ingredients which must be listed on the label:

styrene

hexamethylene diacrylate

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

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : aerosol  
Mixture

#### Components

Chemical name	CAS-No. EC-No. Index-No.	Classification	Concentration (% w/w)

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	Registration number		
acetone	67-64-1 200-662-2 606-001-00-8 01-2119471330-49	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system) EUH066	$\geq 10 - < 20$
styrene	100-42-5 202-851-5 601-026-00-0 01-2119457861-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Repr. 2; H361d STOT SE 3; H335 (Respiratory system) STOT RE 1; H372 (hearing organs) Asp. Tox. 1; H304 Aquatic Chronic 3; H412  Acute toxicity estimate  Acute inhalation toxicity (vapor): 11,8 mg/l	$\geq 5 - < 10$
hexamethylene diacrylate	13048-33-4 235-921-9 607-109-00-8 01-2119484737-22	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411  M-Factor (Acute aquatic toxicity): 1	$\geq 5 - < 10$
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7 423-340-5 015-189-00-5 01-2119489401-38	Skin Sens. 1A; H317 Aquatic Chronic 4; H413	$\geq 1 - < 2,5$
Oligoamine Resin	Not Assigned	Skin Irrit. 2; H315 Eye Irrit. 2; H319  Acute toxicity estimate  Acute oral toxicity: > 5.000 mg/kg Acute dermal toxicity: > 5.000 mg/kg	$\geq 1 - < 2,5$
1,1'-(p-tolylimino)dipropen-2-ol	38668-48-3 254-075-1	Acute Tox. 1; H300 Eye Irrit. 2; H319	$\geq 0,1 - < 1$

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	01-2119980937-17	Aquatic Chronic 3; H412  Acute toxicity estimate  Acute oral toxicity: 0,5 mg/kg	
2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1 404-360-3 606-047-00-9	Repr. 1B; H360D Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,025 - < 0,25
Substances with a workplace exposure limit :			
dimethyl ether	115-10-6 204-065-8 603-019-00-8 01-2119472128-37	Flam. Gas 1A; H220 Press. Gas Compr. Gas; H280	>= 25 - < 50

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

- General advice : First aider needs to protect himself.  
Remove from exposure, lie down.  
If unconscious, place in recovery position and seek medical advice.  
Take off contaminated clothing and shoes immediately.  
Symptoms of poisoning may appear several hours later.
- If inhaled : Move to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
If symptoms persist, call a physician.
- In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If eye irritation persists, consult a specialist.
- If swallowed : Swallowing is not regarded as a possible method for exposure.  
If symptoms persist, call a physician.

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

Risks	: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.
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### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment	: Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media	: Carbon dioxide (CO <sub>2</sub> ) Dry powder Water spray jet Alcohol-resistant foam
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Unsuitable extinguishing media	: High volume water jet
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### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	: Vapors may form explosive mixtures with air. Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
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Hazardous combustion products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
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### 5.3 Advice for firefighters

Special protective equipment for fire-fighters	: Use personal protective equipment. Wear suitable respiratory protection equipment.
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Further information	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.
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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: Wear personal protective equipment. Evacuate personnel to safe areas. Remove all sources of ignition.
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Ensure adequate ventilation.  
Avoid inhalation of vapor or mist.  
Avoid contact with skin, eyes and clothing.

### 6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.  
If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Ventilate the area.  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Local/Total ventilation : Ensure adequate ventilation.

Advice on safe handling : Pressurized container: Protect from sunlight and do not expose to temperatures exceeding 50°C / 122 °F. Also after use, do not open with force or burn.  
Provide sufficient air exchange and/or exhaust in work rooms.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.  
Keep away from open flames, hot surfaces and sources of ignition. Keep away from direct sunlight.

Hygiene measures : Do not inhale aerosol.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Please observe the storage instructions for aerosols! Keep containers tightly closed in a cool, well-ventilated place. Solvent vapors are heavier than air and may spread along floors.  
Keep away from direct sunlight. Keep away from heat and sources of ignition.

Further information on storage conditions : Storage must be in accordance with the BetrSichV (Germany).

Advice on common storage : Keep away from food and drink.

Storage class (TRGS 510) : 2B

### 7.3 Specific end use(s)

Specific use(s) : No data available

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
dimethyl ether	115-10-6	TWA	1.000 ppm 1.920 mg/m <sup>3</sup>	2000/39/EC
	Further information: Indicative			
		AGW	1.000 ppm 1.900 mg/m <sup>3</sup>	DE TRGS 900
	Peak-limit category: 8;(II)			
acetone	67-64-1	TWA	500 ppm 1.210 mg/m <sup>3</sup>	2000/39/EC
	Further information: Indicative			
		AGW	500 ppm 1.200 mg/m <sup>3</sup>	DE TRGS 900
	Peak-limit category: 2;(I)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
styrene	100-42-5	AGW	20 ppm 86 mg/m <sup>3</sup>	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

##### Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
acetone	67-64-1	Acetone: 80 mg/l (Urine)	Immediately after exposure or after working hours	TRGS 903
styrene	100-42-5	mandelic acid + phenylglyoxylic acid: 600 mg/g Creatinine (Urine)	In case of long-term exposure: after more than one shift, Immediately after exposure or after working hours	TRGS 903

##### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
acetone	Workers	Inhalation	Long-term systemic effects	1210 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	2420 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	186 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	200 mg/m <sup>3</sup>



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	Consumers	Skin contact, Oral	Long-term systemic effects	62 mg/kg bw/day
styrene	Workers	Dermal	Long-term systemic effects, Chronic ef- fects	406 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects, Chronic ef- fects	85 mg/m3
	Workers	Inhalation	Acute systemic ef- fects, Chronic effects	289 mg/m3
	Workers	Inhalation	Acute local effects, Short-term exposure	306 mg/m3
	Consumers	Oral	Long-term systemic effects, Chronic ef- fects	2,1 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects, Chronic ef- fects	343 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects, Chronic ef- fects	10,2 mg/m3
	Consumers	Inhalation	Acute systemic ef- fects, Short-term exposure	174,25 mg/m3
	Consumers	Inhalation	Acute local effects, Short-term exposure	182,75 mg/m3
hexamethylene di- acrylate	Workers	Inhalation	Long-term systemic effects	24,5 mg/m3
	Workers	Skin contact	Long-term systemic effects	2,77 mg/kg
	Consumers	Inhalation	Long-term systemic effects	7,2 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1,66 mg/kg
	Consumers	Oral	Long-term systemic effects	2,1 mg/kg
phenyl bis(2,4,6- trimethylbenzoyl)- phosphine oxide	Workers	Inhalation	Long-term systemic effects	21 mg/m3
	Workers	Skin contact	Long-term systemic effects	3 mg/kg
	Consumers	Inhalation	Long-term systemic effects	5,2 mg/m3
	Consumers	Skin contact, Oral	Long-term systemic effects	1,5 mg/kg
1,1'-(p- tolylimino)dipropen-2- ol	Workers	Inhalation	Long-term systemic effects	2,47 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,7 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,25 mg/kg bw/day

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### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
acetone	Fresh water	10,6 mg/l
	Sea water	1,06 mg/l
	Sewage treatment plant (STP)	100 mg/l
	Fresh water sediment	30,4 mg/kg dry weight (d.w.)
	Sea sediment	3,04 mg/kg dry weight (d.w.)
	Soil	29,5 mg/kg dry weight (d.w.)
styrene	Fresh water	0,028 mg/l
	Sea water	0,014 mg/l
	Fresh water sediment	0,614 mg/kg dry weight (d.w.)
	Sea sediment	0,307 mg/kg dry weight (d.w.)
	Soil	0,2 mg/kg dry weight (d.w.)
	Sewage treatment plant (STP)	5 mg/l
hexamethylene diacrylate	Fresh water	0,007 mg/l
	Sea water	0,001 mg/l
	Sewage treatment plant (STP)	2,7 mg/l
	Fresh water sediment	0,493 mg/kg
	Sea sediment	0,049 mg/kg
	Soil	0,094 mg/kg
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Fresh water	0,001 mg/l
	Sea water	0,001 mg/l
	Sewage treatment plant (STP)	1 mg/l
	Fresh water sediment	0,712 mg/kg
	Sea sediment	0,712 mg/kg
	Soil	20 mg/kg
1,1'-(p-tolylimino)dipropan-2-ol	Fresh water	0,017 mg/l
	Sea water	0,002 mg/l
	Sewage treatment plant (STP)	199,5 mg/l
	Fresh water sediment	0,163 mg/kg dry weight (d.w.)
	Sea sediment	0,016 mg/kg dry weight (d.w.)
	Soil	0,023 mg/kg dry weight (d.w.)

### 8.2 Exposure controls

#### Personal protective equipment

Eye/face protection : Tightly fitting safety goggles  
Safety glasses with side-shields conforming to EN166

Hand protection

Material : butyl-rubber

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Break through time : < 15 min  
Glove thickness : >= 0,7 mm  
Directive : DIN EN 374

Material : Nitrile rubber  
Directive : DIN EN 374

Remarks : The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Preventive skin protection

Skin and body protection : Please wear suitable protective clothing, e.g. made of cotton or heat-resistant synthetic fibres.  
Long sleeved clothing

Respiratory protection : No personal respiratory protective equipment normally required.  
In case of inadequate ventilation wear respiratory protection.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Filter type : Filter type A-P

Protective measures : Use only with adequate ventilation.  
When using do not eat, drink or smoke.  
Avoid contact with skin, eyes and clothing.  
Do not breathe vapors or spray mist.

### Environmental exposure controls

Soil : Avoid subsoil penetration.  
Water : Do not flush into surface water or sanitary sewer system.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : aerosol  
Color : colorless, transparent  
Odor : characteristic  
Melting point/freezing point : not determined  
Initial boiling point and boiling range : -24,9 °C  
Upper explosion limit / Upper flammability limit : 18,6 %(V)

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Lower explosion limit / Lower flammability limit	:	2,6 %(V)
Flash point	:	< 0 °C
Autoignition temperature	:	235 °C
pH	:	not determined substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	immiscible
Partition coefficient: n-octanol/water	:	not determined
Vapor pressure	:	3.400 hPa (20 °C)
Density	:	not determined
Relative vapor density	:	not determined

### 9.2 Other information

Explosives	:	Not explosive In use, may form flammable/explosive vapor-air mixture.
Flammability (liquids)	:	Extremely flammable aerosol.
Self-ignition	:	not auto-flammable

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if used as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	:	Vapors may form explosive mixture with air.
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### 10.4 Conditions to avoid

Conditions to avoid	:	Keep away from heat and sources of ignition. Strong sunlight for prolonged periods.
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### 10.5 Incompatible materials

Materials to avoid : No data available

### 10.6 Hazardous decomposition products

Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

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## SECTION 11: Toxicological information

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

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : Acute toxicity estimate (Rat): 80.209 mg/kg  
Method: Expert judgment

Acute inhalation toxicity : Acute toxicity estimate (Rat): 120 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgment

#### Components:

##### **acetone:**

Acute oral toxicity : LD50 Oral (Rat): 5.800 mg/kg

Acute inhalation toxicity : LC50 (Rat): ca. 76 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): > 7.400 mg/kg

##### **styrene:**

Acute oral toxicity : LD50 Oral (Rat): 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 11,8 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402

##### **hexamethylene diacrylate:**

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0,41 mg/l  
Exposure time: 7 h  
Test atmosphere: vapor

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Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 Dermal (Rabbit): 3.650 mg/kg  
Method: OECD Test Guideline 402

### **phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide:**

Acute oral toxicity : LD50 Oral (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402

### **Oligoamine Resin:**

Acute oral toxicity : Acute toxicity estimate: > 5.000 mg/kg  
Method: Expert judgment

Acute dermal toxicity : Acute toxicity estimate: > 5.000 mg/kg  
Method: Expert judgment

### **1,1'-(p-tolylimino)dipropyl-2-ol:**

Acute oral toxicity : Acute toxicity estimate: 0,5 mg/kg  
Method: Expert judgment

Acute dermal toxicity : LD50 Dermal (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402

### **2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg  
Method: OECD Test Guideline 402

### **Skin corrosion/irritation**

Causes skin irritation.

### **Components:**

#### **styrene:**

Species : Rabbit  
Result : irritating

#### **hexamethylene diacrylate:**

Result : Skin irritation

#### **Oligoamine Resin:**

Result : Skin irritation

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### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Components:

##### **styrene:**

Species : Rabbit  
Result : irritating

##### **hexamethylene diacrylate:**

Result : Moderate eye irritation

##### **Oligoamine Resin:**

Result : Moderate eye irritation

##### **1,1'-(p-tolylimino)dipropen-2-ol:**

Result : Moderate eye irritation

### Respiratory or skin sensitization

#### **Skin sensitization**

May cause an allergic skin reaction.

#### **Respiratory sensitization**

Not classified based on available information.

#### Components:

##### **styrene:**

Species : Guinea pig  
Result : Does not cause skin sensitization.

##### **hexamethylene diacrylate:**

Result : The product is a skin sensitizer, sub-category 1B.

##### **phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide:**

Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : May cause sensitization by skin contact.

### Germ cell mutagenicity

Not classified based on available information.

### Carcinogenicity

Not classified based on available information.

### Reproductive toxicity

Suspected of damaging the unborn child.

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### **Components:**

#### **styrene:**

Reproductive toxicity - Assessment : Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal experiments.

#### **2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone:**

Reproductive toxicity - Assessment : Positive evidence of adverse effects on development from human epidemiological studies.

#### **STOT-single exposure**

Not classified based on available information.

### **Components:**

#### **styrene:**

Assessment : May cause respiratory irritation.

#### **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

### **Components:**

#### **styrene:**

Routes of exposure : Inhalation  
Target Organs : hearing organs  
Assessment : Causes damage to organs through prolonged or repeated exposure.

#### **Aspiration toxicity**

Not classified based on available information.

### **Components:**

#### **styrene:**

May be fatal if swallowed and enters airways.

## 11.2 Information on other hazards

### **Endocrine disrupting properties**

#### **Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.



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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Components:

##### **acetone:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.540 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): 8.800 mg/l  
aquatic invertebrates End point: mortality  
Exposure time: 48 h

Toxicity to algae/aquatic : NOEC (algae): 430 mg/l  
plants Exposure time: 96 h

Toxicity to microorganisms : EC10 (Bacteria): 1.000 mg/l  
Exposure time: 0,5 h  
Method: OECD Test Guideline 209

Toxicity to daphnia and other : NOEC: 2.212 mg/l  
aquatic invertebrates (Chron- Exposure time: 28 d  
ic toxicity) Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

##### **styrene:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4,02 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 4,7 mg/l  
aquatic invertebrates Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Selenastrum capricornutum (green algae)): 4,9 mg/l  
plants Exposure time: 72 h  
  
EC10 (Selenastrum capricornutum (green algae)): 0,28 mg/l  
Exposure time: 96 h

Toxicity to microorganisms : EC50 (Natural microorganism): ca. 500 mg/l  
Method: OECD Test Guideline 209

Toxicity to daphnia and other : NOEC: 1,01 mg/l  
aquatic invertebrates (Chron- Exposure time: 21 d  
ic toxicity) Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

##### **Ecotoxicology Assessment**

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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### hexamethylene diacrylate:

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 0,8 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,7 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 2,33 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to fish (Chronic toxicity) : NOEC: 0,072 mg/l  
Exposure time: 39 d  
Species: Oryzias latipes (Orange-red killifish)  
Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,14 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

### phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide:

#### Ecotoxicology Assessment

- Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

### 1,1'-(p-tolylimino)dipropen-2-ol:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 17 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 28 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 245 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- NOEC (Desmodesmus subspicatus (green algae)): 57,8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

#### Ecotoxicology Assessment

- Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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### **2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone:**

Toxicity to fish : LC50 (Fish): 0,46 mg/l  
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,21 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1

## 12.2 Persistence and degradability

### Components:

#### **acetone:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 90,9 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

#### **styrene:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 70,9 %  
Exposure time: 28 d

#### **hexamethylene diacrylate:**

Biodegradability : Result: Readily biodegradable.  
Exposure time: 28 d

#### **1,1'-(p-tolylimino)dipropen-2-ol:**

Biodegradability : Result: Biodegradable

#### **2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone:**

Biodegradability : Result: Not readily biodegradable.

## 12.3 Bioaccumulative potential

### Components:

#### **acetone:**

Bioaccumulation : Bioconcentration factor (BCF): 3  
Remarks: Calculation

Partition coefficient: n-octanol/water : log Pow: -0,24 (20 °C)

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### **styrene:**

Partition coefficient: n-octanol/water : log Pow: 2,96 (25 °C)

### **hexamethylene diacrylate:**

Partition coefficient: n-octanol/water : log Pow: 2,81 (25 °C)

### **phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide:**

Partition coefficient: n-octanol/water : log Pow: 5,8 (22 °C)

### **1,1'-(p-tolylimino)dipropen-2-ol:**

Partition coefficient: n-octanol/water : log Pow: 2,1 (24 °C)

### **2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone:**

Partition coefficient: n-octanol/water : log Pow: 2,91 (25 °C)

### **dimethyl ether:**

Partition coefficient: n-octanol/water : log Pow: 0,07 (25 °C)

## **12.4 Mobility in soil**

No data available

## **12.5 Results of PBT and vPvB assessment**

### **Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## **12.6 Endocrine disrupting properties**

### **Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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### 12.7 Other adverse effects

#### Product:

Additional ecological information : No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product	: According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Dispose of in conjunction with appropriate waste disposal authorities and in accordance with disposal regulations.
Contaminated packaging	: Dispose of in accordance with local regulations.
Waste Code	: The following Waste Codes are only suggestions: 15 01 10, packaging containing residues of or contaminated by hazardous substances

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADN	: UN 1950
ADR	: UN 1950
RID	: UN 1950
IMDG	: UN 1950
IATA	: UN 1950

### 14.2 UN proper shipping name

ADN	: AEROSOLS
ADR	: AEROSOLS
RID	: AEROSOLS
IMDG	: AEROSOLS
IATA	: Aerosols, flammable

### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 2	2.1
ADR	: 2	2.1
RID	: 2	2.1
IMDG	: 2.1	

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**IATA** : 2.1

### 14.4 Packing group

#### ADN

Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1

#### ADR

Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1  
Tunnel restriction code : (D)

#### RID

Packing group : Not assigned by regulation  
Classification Code : 5F  
Hazard Identification Number : 23  
Labels : 2.1

#### IMDG

Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U

#### IATA (Cargo)

Packing instruction (cargo aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation  
Labels : Flammable Gas

#### IATA (Passenger)

Packing instruction (passenger aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation  
Labels : Flammable Gas

### 14.5 Environmental hazards

#### ADN

Environmentally hazardous : no

#### ADR

Environmentally hazardous : no

#### RID

Environmentally hazardous : no

#### IMDG

Marine pollutant : no

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:  
Number on list 75  
If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59). : 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. acetone (ANNEX II)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P3a FLAMMABLE AEROSOLS

Water hazard class (Germany) : WGK 2 obviously hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

Volatile organic compounds : Directive 2004/42/EC  
Volatile organic compounds (VOC) content: < 840 g/l  
VOC content for the product in a ready to use condition.

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### Other regulations:

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical Safety Assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

## SECTION 16: Other information

### Full text of H-Statements

H220	: Extremely flammable gas.
H225	: Highly flammable liquid and vapor.
H226	: Flammable liquid and vapor.
H280	: Contains gas under pressure; may explode if heated.
H300	: Fatal if swallowed.
H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H360D	: May damage the unborn child.
H361d	: Suspected of damaging the unborn child.
H372	: Causes damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.
H413	: May cause long lasting harmful effects to aquatic life.
EUH066	: Repeated exposure may cause skin dryness or cracking.

### Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Eye Irrit.	: Eye irritation
Flam. Gas	: Flammable gases
Flam. Liq.	: Flammable liquids
Press. Gas	: Gases under pressure
Repr.	: Reproductive toxicity
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitization
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first



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	list of indicative occupational exposure limit values
DE TRGS 900	: Germany. TRGS 900 - Occupational exposure limit values.
TRGS 903	: c - Biological limit values
2000/39/EC / TWA	: Limit Value - eight hours
DE TRGS 900 / AGW	: Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Aerosol 1	H222, H229
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 2	H361d
STOT RE 2	H373
Aquatic Chronic 3	H412

#### Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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