Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)

GENERIC EU SDS - NO COUNTRY SPECIFIC DATA

UV Putty Transparent

Version number: 1.0 Date of compilation: 15.08.2024

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

1.1 Product identifier

Trade name	**UV Putty Transparent**
Registration number (REACH)	not relevant (mixture)
Unique formula identifier (UFI)	TP5R-0M5F-D20T-93HK

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

Relevant identified uses	Putty Professional use

1.3 Details of the supplier of the safety data sheet

EMM International BV
Bohemenstraat 19
8028 SB Zwolle
Netherlands

Telephone: +31 38 4676600
e-mail: msds@colad.com
Website: www.colad.com

e-mail (competent person)	msds@colad.com

1.4 Emergency telephone number

Emergency information service	+ 31 38 4676600 This number is only available during the following office hours: Mon-Fri 08:00 - 17:00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.4S	skin sensitisation	1	Skin Sens. 1	H317
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of H-phrases: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word: Warning
- pictograms

GHS07, GHS09

- hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

- precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTRE/doctor if you feel unwell.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- hazardous ingredients for labelling

Contains: exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate; 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol; hexamethylene diacrylate; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid; (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate; Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate.

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Hexanoic acid, 6-[[[[[1,3,3-trimethyl-5-[[[[6-oxo-6-[2-[(1-oxo-2-propenyl)oxy]ethoxy]hexyl]oxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]-, 2-[(1-oxo-2-propenyl) oxy]ethylester	CAS No 119107-13-0	50 – < 75	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	CAS No 5888-33-5 EC No 227-561-6 Index No 607-756-00-6 REACH Reg. No 01-2119957862-25-xxxx	10 – < 25	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1A / H317 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		GHS-HC

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	CAS No 67906-98-3 EC No 630-518-8	10 – < 25	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 STOT SE 3 / H335 Aquatic Chronic 3 / H412		
hexamethylene diacrylate	CAS No 13048-33-4 EC No 235-921-9 Index No 607-109-00-8 REACH Reg. No 01-2119484737-22-xxxx	5 – < 10	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411		D GHS-HC
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	CAS No 55818-57-0 EC No 500-130-2 REACH Reg. No 01-2119490020-53-xxxx	2,5 – < 5	Skin Sens. 1 / H317 Aquatic Chronic 2 / H411		
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	CAS No 84434-11-7 EC No 282-810-6 REACH Reg. No 01-2119987994-10-xxxx	2,5 – < 5	Skin Sens. 1B / H317 Aquatic Chronic 2 / H411		
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	CAS No 42978-66-5 EC No 256-032-2 Index No 607-249-00-X REACH Reg. No 01-2119484613-34-xxxx	1 – < 2,5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 STOT SE 3 / H335 Aquatic Chronic 2 / H411		GHS-HC
Acrylic acid	CAS No 79-10-7 EC No 201-177-9 Index No 607-061-00-8 REACH Reg. No 01-2119452449-31-xxxx	< 0,1	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Corr. 1A / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411		D GHS-HC IOELV
toluene	CAS No 108-88-3 EC No 203-625-9 Index No	< 0,1	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315 Repr. 2 / H361d STOT SE 3 / H336 STOT RE 2 / H373 Asp. Tox. 1 / H304 Aquatic Chronic 3 / H412		GHS-HC IOELV

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
	601-021-00-3 REACH Reg. No 01-2119471310-51-xxxx				

Notes

D: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	CAS No 42978-66-5	STOT SE 3; H335: C ≥ 10 %	-	-	
Acrylic acid	CAS No 79-10-7	STOT SE 3; H335: C ≥ 1 %	-	1.000 $^{mg}/_{kg}$ 1.100 $^{mg}/_{kg}$ 11 $^{mg}/_{l}$/4h	oral dermal inhalation: vapour

Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Wash with plenty of soap and water. Call a POISON CENTER/doctor.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions (such as skin rashes, hives, asthma or anaphylactic shock). Cough. Causes tears. Conjunctivitis (pink eye). Localised redness, oedema, pruritis and/or pain.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray; Dry extinguishing powder; Carbon dioxide (CO2);
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO2).

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (SCBA). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomite, diatomaceous earth, acid binder, universal binder, sawdust).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

Store in a well-ventilated place. Keep container tightly closed.

- packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Generic EU SDS - No country specific limit values mentioned.

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
EU	toluene	108-88-3	IOELV	50	192	100	384	H	2006/15/EC
EU	acrylic acid (prop-2-enoic acid)	79-10-7	IOELV	10	29	20 (1 min)	59 (1 min)		2017/164/EU

Notation

H	absorbed through the skin
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	DNEL	4,9 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	DNEL	1,39 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	DNEL	1,45 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	DNEL	0,83 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	DNEL	0,83 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
hexamethylene diacrylate	13048-33-4	DNEL	24,5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
hexamethylene diacrylate	13048-33-4	DNEL	2,77 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
hexamethylene diacrylate	13048-33-4	DNEL	7,2 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
hexamethylene diacrylate	13048-33-4	DNEL	1,66 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
hexamethylene diacrylate	13048-33-4	DNEL	2,1 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	DNEL	1,17 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	DNEL	33 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	DNEL	4,93 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	DNEL	1,4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	DNEL	0,87 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	DNEL	0,5 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	DNEL	0,5 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	DNEL	2,35 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	DNEL	1,7 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Acrylic acid	79-10-7	DNEL	30 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Acrylic acid	79-10-7	DNEL	30 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Acrylic acid	79-10-7	DNEL	30 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Acrylic acid	79-10-7	DNEL	30 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Acrylic acid	79-10-7	DNEL	3,6 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Acrylic acid	79-10-7	DNEL	3,6 mg/m³	human, inhalatory	consumer (private households)	acute - systemic effects
Acrylic acid	79-10-7	DNEL	3,6 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
Acrylic acid	79-10-7	DNEL	3,6 mg/m³	human, inhalatory	consumer (private households)	acute - local effects
Acrylic acid	79-10-7	DNEL	0,4 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Acrylic acid	79-10-7	DNEL	1,2 mg/kg bw/day	human, oral	consumer (private households)	acute - systemic effects
toluene	108-88-3	DNEL	192 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
toluene	108-88-3	DNEL	384 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
toluene	108-88-3	DNEL	192 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
toluene	108-88-3	DNEL	384 mg/m³	human, inhalatory	worker (industry)	acute - local effects
toluene	108-88-3	DNEL	384 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
toluene	108-88-3	DNEL	56,5 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
toluene	108-88-3	DNEL	226 mg/m³	human, inhalatory	consumer (private households)	acute - systemic effects
toluene	108-88-3	DNEL	56,5 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
toluene	108-88-3	DNEL	226 mg/m³	human, inhalatory	consumer (private households)	acute - local effects
toluene	108-88-3	DNEL	226 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
toluene	108-88-3	DNEL	8,13 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	0,001 mg/l	aquatic organisms	freshwater	short-term (single instance)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	0,145 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	0,015 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	PNEC	0,029 mg/kg	terrestrial organisms	soil	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	0,007 mg/l	aquatic organisms	freshwater	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	0,001 mg/l	aquatic organisms	marine water	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	2,7 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	0,493 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	0,049 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
hexamethylene diacrylate	13048-33-4	PNEC	0,094 mg/kg	terrestrial organisms	soil	short-term (single instance)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	PNEC	0,025 mg/l	aquatic organisms	freshwater	short-term (single instance)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	PNEC	0,003 mg/l	aquatic organisms	marine water	short-term (single instance)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	PNEC	8,96 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
4,4'-Isopropylidenedi-	55818-57-0	PNEC	0,896 mg/kg	aquatic organisms	marine sediment	short-term (single

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
phenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid						instance)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	PNEC	1,78 mg/kg	terrestrial organisms	soil	short-term (single instance)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	PNEC	1,01 µg/l	aquatic organisms	freshwater	short-term (single instance)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	PNEC	0,101 µg/l	aquatic organisms	marine water	short-term (single instance)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	PNEC	0,24 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	PNEC	24 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	PNEC	47,5 µg/kg	terrestrial organisms	soil	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	0,005 mg/l	aquatic organisms	freshwater	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	0,487 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	0,049 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	PNEC	0,095 mg/kg	terrestrial organisms	soil	short-term (single instance)
Acrylic acid	79-10-7	PNEC	0,003 mg/l	aquatic organisms	freshwater	short-term (single instance)
Acrylic acid	79-10-7	PNEC	0,3 µg/l	aquatic organisms	marine water	short-term (single instance)
Acrylic acid	79-10-7	PNEC	0,9 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Acrylic acid	79-10-7	PNEC	0,024 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Acrylic acid	79-10-7	PNEC	0,002 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Acrylic acid	79-10-7	PNEC	1 mg/kg	terrestrial organisms	soil	short-term (single instance)
toluene	108-88-3	PNEC	0,68 mg/l	aquatic organisms	water	intermittent release
toluene	108-88-3	PNEC	0,68 mg/l	aquatic organisms	freshwater	short-term (single instance)
toluene	108-88-3	PNEC	0,68 mg/l	aquatic organisms	marine water	short-term (single instance)
toluene	108-88-3	PNEC	13,61 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
toluene	108-88-3	PNEC	16,39 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
toluene	108-88-3	PNEC	16,39 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
toluene	108-88-3	PNEC	2,89 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation. Provide eyewash stations and safety showers at the workplace.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection (EN 166).

Skin protection

Chemical protective clothing. Protective clothing (EN 340 & EN ISO 13688).

Hand protection

Wear suitable gloves. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Chemical protection gloves are suitable, which are tested according to EN 374. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

PVC: polyvinyl chloride, Nitrile rubber, Butyl rubber, NP: neoprene

- material thickness

Use gloves with a minimum material thickness: ≥ 0,5 mm.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >480 minutes (permeation: level 6).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Full face mask/half mask/quarter mask (EN 136/140). Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	transparent
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	98,82 °C at 0,71 mbar calculated value, referring to a component of the mixture
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	LEL: UEL: not determined
Flash point	no data available
Auto-ignition temperature	214 °C (auto-ignition temperature (liquids and gases)) calculated value, referring to a component of the mixture
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	not determined
Solubility	not determined

Partition coefficient n-octanol/water (log value)	this information is not available

Vapour pressure	0,013 hPa at 20 °C calculated value, referring to a component of the mixture

Density and/or relative density

Density	1,097 $^{g}/_{ml}$
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated:

Exothermic polymerisation.

If exposed to light:

Exothermic polymerisation.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

UV-radiation/sunlight.

10.5 Incompatible materials

Oxidisers. Reducing agents. Strong acids and bases.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
Acrylic acid	79-10-7	oral	1.000 $^{mg}/_{kg}$
Acrylic acid	79-10-7	dermal	1.100 $^{mg}/_{kg}$
Acrylic acid	79-10-7	inhalation: vapour	11 $^{mg}/_{l}$/4h

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	oral	LD50	5.750 $^{mg}/_{kg}$	rat
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-	5888-33-5	dermal	LD50	>3.000 $^{mg}/_{kg}$	rabbit

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
yl acrylate					
hexamethylene diacrylate	13048-33-4	oral	LD50	>5.000 mg/kg	rat
hexamethylene diacrylate	13048-33-4	dermal	LD50	3.650 mg/kg	rabbit
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	oral	LD50	>5.000 mg/kg	rat
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	dermal	LD50	>2.000 mg/kg	rat
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	oral	LD50	>2.000 mg/kg	rat
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	dermal	LD50	>2.000 mg/kg	rabbit
Acrylic acid	79-10-7	oral	LD50	1.000 – <2.000 mg/kg	rat
Acrylic acid	79-10-7	dermal	LD50	>2.000 mg/kg	rabbit
toluene	108-88-3	oral	LD50	5.580 mg/kg	rat
toluene	108-88-3	inhalation: vapour	LC50	28,1 mg/l/4h	rat
toluene	108-88-3	dermal	LD50	>5.000 mg/kg	rabbit

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
May cause an allergic skin reaction.

Germ cell mutagenicity
Shall not be classified as germ cell mutagenic.

Carcinogenicity
Shall not be classified as carcinogenic.

Reproductive toxicity
Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties
Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

Other information
There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	LC50	0,704 mg/l	fish	96 h
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	ErC50	1,98 mg/l	algae	72 h
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	EC50	0,596 mg/l	algae	72 h
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	NOEC	0,405 mg/l	algae	72 h
hexamethylene diacrylate	13048-33-4	LC50	0,38 mg/l	fish	96 h
hexamethylene diacrylate	13048-33-4	EC50	8,3 mg/l	aquatic invertebrates	24 h
hexamethylene diacrylate	13048-33-4	ErC50	2,33 mg/l	algae	72 h
hexamethylene diacrylate	13048-33-4	NOEC	3,7 mg/l	aquatic invertebrates	24 h
hexamethylene diacrylate	13048-33-4	growth rate (ErCx) 10%	0,59 mg/l	algae	72 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	LL50	>100 mg/l	fish	96 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	EC50	>16 mg/l	aquatic invertebrates	48 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	EL50	105 mg/l	algae	72 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	ErC50	17 mg/l	algae	72 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	NOELR	≥100 mg/l	aquatic invertebrates	48 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	NOEC	≥16 mg/l	aquatic invertebrates	48 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	LOEC	>16 mg/l	aquatic invertebrates	48 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters	55818-57-0	growth rate (ErCx) 10%	4,8 mg/l	algae	72 h

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
with acrylic acid					
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	growth (EbCx) 10%	0,86 mg/l	algae	72 h
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	LC50	1,89 mg/l	fish	96 h
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	EC50	2,26 mg/l	aquatic invertebrates	48 h
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	ErC50	1,01 mg/l	algae	72 h
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	NOEC	≥1,29 mg/l	fish	96 h
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	growth (EbCx) 10%	1,55 mg/l	aquatic invertebrates	48 h
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	LC50	<10 mg/l	fish	96 h
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	EC50	89 mg/l	aquatic invertebrates	48 h
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	ErC50	65,9 mg/l	algae	72 h
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	NOEC	2,15 mg/l	fish	96 h
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	growth rate (ErCx) 10%	6,6 mg/l	algae	72 h
Acrylic acid	79-10-7	LC50	27 mg/l	fish	96 h
Acrylic acid	79-10-7	EC50	95 mg/l	aquatic invertebrates	48 h
Acrylic acid	79-10-7	NOEC	6,3 mg/l	fish	96 h
toluene	108-88-3	LC50	5,5 mg/l	fish	96 h
toluene	108-88-3	EC50	84 mg/l	microorganisms	24 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	EC50	0,524 mg/l	aquatic invertebrates	21 d
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	NOEC	0,092 mg/l	aquatic invertebrates	21 d
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	LOEC	0,277 mg/l	aquatic invertebrates	21 d
hexamethylene diacrylate	13048-33-4	LC50	0,47 mg/l	aquatic invertebrates	21 d

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
hexamethylene diacrylate	13048-33-4	EC50	0,15 mg/l	aquatic invertebrates	21 d
hexamethylene diacrylate	13048-33-4	NOEC	0,072 mg/l	fish	39 d
hexamethylene diacrylate	13048-33-4	LOEC	0,149 mg/l	fish	39 d
hexamethylene diacrylate	13048-33-4	growth (EbCx) 20%	60 mg/l	microorganisms	30 min
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	EC50	>1.000 mg/l	microorganisms	3 h
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	NOEC	0,25 mg/l	fish	33 d
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	growth (EbCx) 10%	0,43 mg/l	fish	33 d
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	EC50	>1.000 mg/l	microorganisms	180 min
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	growth (EbCx) 20%	>1.000 mg/l	microorganisms	180 min
Acrylic acid	79-10-7	EC50	>8,1 mg/l	aquatic invertebrates	21 d
Acrylic acid	79-10-7	NOEC	≥10,1 mg/l	fish	45 d
Acrylic acid	79-10-7	LOEC	8,1 mg/l	aquatic invertebrates	21 d
Acrylic acid	79-10-7	growth (EbCx) 20%	900 mg/l	microorganisms	30 min
toluene	108-88-3	LC50	3,78 mg/l	aquatic invertebrates	2 d
toluene	108-88-3	EC50	3,23 mg/l	aquatic invertebrates	7 d
toluene	108-88-3	LOEC	2,77 mg/l	fish	40 d
toluene	108-88-3	NOEC	1,39 mg/l	fish	40 d

12.2 Persistence and degradability

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	oxygen depletion	51 %	28 d	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	carbon dioxide generation	2 %	9 d	
hexamethylene diacrylate	13048-33-4	carbon dioxide generation	60 – 70 %	28 d	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0	oxygen depletion	42 %	28 d	
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	oxygen depletion	<10 %	28 d	

Degradability of components					
Name of substance	**CAS No**	**Process**	**Degradation rate**	**Time**	**Method**
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5	carbon dioxide generation	48 %	28 d	

12.3 Bioaccumulative potential

Bioaccumulative potential of components				
Name of substance	**CAS No**	**BCF**	**Log KOW**	**BOD5/COD**
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	37	4,52	
hexamethylene diacrylate	13048-33-4		2,81 (25 °C)	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	55818-57-0		1,6 – 3,8 (pH value: 6,4, 23 °C)	
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7		2,91 (pH value: 4,4, 25 °C)	
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	42978-66-5		>2,5 – <2,7 (pH value: 6,7, 23 °C)	
Acrylic acid	79-10-7	3,162	0,46 (25 °C)	
toluene	108-88-3	90	2,73 (pH value: 7, 20 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN 3082
IMDG-Code	UN 3082
ICAO-TI	UN 3082

14.2 UN proper shipping name

ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name (Hazardous ingredients)	exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, hexamethylene diacrylate

14.3 Transport hazard class(es)

ADR/RID/ADN	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment)	exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, hexamethylene diacrylate

14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

No data available.

Additional information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information

Classification code	M6
Danger label(s)	9, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3

Tunnel restriction code (TRC)	-
Hazard identification No	90

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	yes (hazardous to the aquatic environment) (exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)
Danger label(s)	9, fish and tree

Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	9, fish and tree

Special provisions (SP)	A97, A158, A197, A215
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

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

This Safety Data Sheet is purely informative and does comply with EU regulations, but not with country-specific regulations.

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	Restriction	No
UV Putty Transparent	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
toluene	toluene	R48	48
toluene	flammable / pyrophoric	R40	40
toluene	substances in tattoo inks and permanent make-up	R75	75
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	substances in tattoo inks and permanent make-up	R75	75
Acrylic acid	flammable / pyrophoric	R40	40
Acrylic acid	substances in tattoo inks and permanent make-up	R75	75
hexamethylene diacrylate	substances in tattoo inks and permanent make-up	R75	75

Name	Name acc. to inventory	Restriction	No
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	substances in tattoo inks and permanent make-up	R75	75
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	substances in tattoo inks and permanent make-up	R75	75
Hexanoic acid, 6-[[[[[1,3,3-trimethyl-5 -[[[[6-oxo-6-[2-[(1-oxo -2-propenyl)oxy]ethoxy]hexyl]oxy]carbonyl] amino]cyclohexyl]methyl]amino]carbonyl]ox y]-, 2-[(1-oxo-2-propenyl) oxy]ethylester	substances in tattoo inks and permanent make-up	R75	75
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	substances in tattoo inks and permanent make-up	R75	75

Legend

R3 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ash-trays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and
— present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage”;
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: ‘Just a sip of grill lighter fluid may lead to life threatening lung damage’;
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.’;

R40 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
- metallic glitter intended mainly for decoration,
- artificial snow and frost,
- ‘whoopee’ cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs,
- stink bombs.
2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
‘For professional users only’.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

R48 Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.

R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
(i) 0,1 % by weight, if the substance is used solely as a pH regulator;
(ii) 0,01 % by weight, in all other cases;
(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a con-

Legend

centration equal to or greater than 0,00005 % by weight;
(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
(i) “Rinse-off products”;
(ii) “Not to be used in products applied on mucous membranes”;
(iii) “Not to be used in eye products”;
(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture “for tattooing purposes” means injection or introduction of the mixture into a person’s skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
(a) the statement “Mixture for use in tattoos or permanent make-up”;
(b) a reference number to uniquely identify the batch;
(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. “Ingredient” means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
(d) the additional statement “pH regulator” for substances falling under point (d)(i) of paragraph 1;
(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.
Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.
8. Mixtures that do not contain the statement “Mixture for use in tattoos or permanent make-up” shall not be used for tattooing purposes.
9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).
10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

Not relevant.

Seveso Directive

2012/18/EU (Seveso III)				
No	**Dangerous substance/hazard categories**	**Qualifying quantity (tonnes) for the application of lower and upper-tier requirements**		**Notes**
E2	environmental hazards (hazardous to the aquatic environ-	200	500	57)

2012/18/EU (Seveso III)			
No	**Dangerous substance/hazard categories**	**Qualifying quantity (tonnes) for the application of lower and upper-tier requirements**	**Notes**
	ment, cat. 2)		

Notation

57) hazardous to the Aquatic Environment in category Chronic 2

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)			
Name acc. to inventory	**CAS No**	**Remarks**	**Threshold for releases to air (kg/year)**
toluene	108-88-3	(11)	

Legend

(11) Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylenes) is exceeded

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	**Name acc. to inventory**	**CAS No**	**Listed in**	**Remarks**
toluene	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	Organohalogen compounds and substances which may form such compounds in the aquatic environment		a)	
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	Organophosphorous compounds		a)	

Legend

a) Indicative list of the main pollutants

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
NOELR	No Observed Effect Loading Rate
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause 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.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.