Safety Data Sheet

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Version 5.1

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

1.1. Product Identifier

Product name T53R4
UFI:SENW-TKFD-KJ0K-VV0R

Pure substance/mixture mixture

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

Recommended Use Ink jet ink (UV curing)

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Company Name
EPSON EUROPE B.V.
Azie building, Atlas ArenA, Hoogoorddreef 5,1101 BA Amsterdam Zuidoost The Netherlands
Phone number: +31-20-314-5000

Importer / Supplier
-

For further information, please contact

Contact Point +31-20-314-5000
Email address chemicals@epson.eu

1.4. Emergency telephone number

Emergency telephone
Phone number: +31-20-314-5000
Giftnotruf Berlin; +49 (0)30 30686 790
Antigif Belgisch; +32 (0)70 245 245
Austria; +43 1 406 43 43

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitisation	Category 1A - (H317)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity — repeated exposure	Category 1 - (H372)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label Elements

Symbols/Pictograms

Signal Word
DANGER

hazard statements
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or 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
Contains 2-Propenoic acid, phenylmethyl ester
2H-Azepin-2-one, 1-ethenylhexahydro-
Morpholine, 4-(1-oxo-2-propenyl)-
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-
EUH208 - May produce an allergic reaction

precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
P321 - Specific treatment
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash it before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P314 - Get medical advice/attention if you feel unwell
P273 - Avoid release to the environment
P391 - Collect spillage

2.3. Other Hazards

General Hazards No information available

SECTION 3: Composition/information on ingredients

3.1 Substances

3.2 MIXTURES

Ingredients contributing to the classification of the mixture, etc.

Chemical name	EC No	CAS No	weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP] / Other	REACH registration number
2-Propenoic acid, phenylmethyl ester	219-673-9	2495-35-4	30-40	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
2H-Azepin-2-one, 1-ethenylhexahydro-	218-787-6	2235-00-9	10-20	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Skin Sens. 1B (H317) STOT RE 1 (H372)	-
Morpholine, 4-(1-oxo-2-propenyl)-	-	5117-12-4	10-20	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	-
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	227-561-6	5888-33-5	10-20	Acute Tox. 5 (H303) Acute Tox. 5 (H313) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	278-355-8	75980-60-8	5-10	Repr. 2 (H361)	-
Trimethylolpropane polyoxyethylene triacrylate	-	28961-43-5	5-10	Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Chronic 3 (H412)	-
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	230-811-7	7328-17-8	5-10	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) Aquatic Chronic 2 (H411)	-
Benzene, ethenyl-, copolymer with 2,5-Furandione and Benzene, 1,1'-(1,1-dimethyl-3-methylene-1,3-propanediyl) bis-, rp. with Oxirane,methyl, polymer with oxirane, 2-aminopropyl methyl ether and 1,3-Propanediamine, N,N-dimethyl-, Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. - quaternised, compound with Benzoic acid	-	-	< 1	Aquatic Acute 1 (H400)	-
Bis(2-ethylhexyl)-2-butenedioate	205-524-5	142-16-5	< 1	Skin Sens. 1B (H317) Aquatic Acute 3 (H402) Aquatic Chronic 1 (H410)	-
Caprolactam	203-313-2	105-60-2	< 1	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Acute Tox. 4 (H312) Repr. 2 (H361) STOT RE 1 (H372)	-

1,6-Hexanediol diacrylate	235-921-9	13048-33-4	< 1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	-	52408-84-1	< 1	Eye Irrit. 2A (H319) Skin Sens. 1 (H317)	-
2,5-Cyclohexadien-1-one, 2,6-bis(1,1-dimethylethyl)-4-(phenylmethylene)-	-	7078-98-0	< 1	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	-
4-Methoxyphenol	205-769-8	150-76-5	< 1	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Carc. 2 (H351) Repr. 2 (H361) Aquatic Acute 2 (H401)	-

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Immediate medical attention is required
If symptoms persist, call a doctor
Do not breathe dust/fume/gas/mist/vapours/spray
Do not get in eyes, on skin, or on clothing
May produce an allergic reaction

inhalation

Remove to fresh air
Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation
Seek immediate medical attention/advice
If breathing is irregular or stopped, administer artificial respiration
Move to fresh air in case of accidental inhalation of vapours
If symptoms persist, call a doctor
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF INHALED: Call a POISON CENTER or doctor if you feel unwell

Skin contact

Immediate medical attention is required
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes
Wash contaminated clothing before reuse
Wash off immediately with soap and plenty of water
If skin irritation persists, call a doctor
Get medical attention if irritation develops and persists

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
Keep eye wide open while rinsing
Call a doctor immediately
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
If symptoms persist, call a doctor
If eye irritation persists: Get medical advice/attention

INGESTION

Do NOT induce vomiting
Clean mouth with water and drink afterwards plenty of water
Never give anything by mouth to an unconscious person

	Call a doctor or poison control centre immediately Call a doctor Potential for aspiration if swallowed Get medical attention Clean mouth with water
Self-protection of the first aider	Use personal protection recommended in Section 8 Avoid contact with skin, eyes or clothing

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

Symptoms No information available

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

Note to doctors May cause sensitization of susceptible persons
Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media CO_2, dry chemical, dry sand, alcohol-resistant foam, mist of alkali salts water
Move containers from fire area if you can do it without risk
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Remove combustible materials from their surroundings immediately

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical In the event of fire and/or explosion do not breathe fumes
May cause sensitisation by inhalation and skin contact
Thermal decomposition can lead to release of irritating and toxic gases and vapours
The product causes irritation of eyes, skin and mucous membranes

5.3. Advice for firefighters

Special protective equipment for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary
Use personal protective equipment as required
In the event of fire and/or explosion do not breathe fumes
Special protective equipment for fire-fighters

Special Extinguishing Media Cool container with water spray

Flammable properties May re-ignite after fire is extinguished
Flammable/combustible material

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required

Keep people away from and upwind of spill/leak
Evacuate personnel to safe areas
Stay upwind
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)
Avoid contact with skin, eyes and inhalation of vapours
In the case of vapour formation use a respirator with filter model
In case of fire: Stop leak if safe to do so
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing
Ensure adequate ventilation, especially in confined areas
Take precautionary measures against static discharges

Other information Ventilate the area

6.2. Environmental precautions

Environmental Precautions

Prevent further leakage or spillage if safe to do so
Prevent product from entering drains
Do not flush into surface water or sanitary sewer system
See Section 12 for additional Ecological Information
Dispose of contents/container to an approved waste disposal plant
Avoid release to the environment
Collect spillage

6.3. Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so
Cover powder spill with plastic sheet or tarp to minimise spreading
Dyke far ahead of liquid spill for later disposal

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material
Cover powder spill with plastic sheet or tarp to minimise spreading
Sweep up and shovel into suitable containers for disposal
Soak up with inert absorbent material
Dam up
Pick up and transfer to properly labelled containers
Use only non-sparking tools

6.4. Reference to other sections

Reference to other sections No information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing
Wash contaminated clothing before reuse
Do not eat, drink or smoke when using this product
Use personal protection recommended in Section 8
Do not breathe dust/fume/gas/mist/vapours/spray
Use with local exhaust ventilation
Take precautionary measures against static discharges
Use only in well-ventilated areas
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea
Wash hands thoroughly and gargle after handling
Burn or dispose of the wiping cloths used to clean up the product at once

May cause sensitisation by inhalation and skin contact

General hygiene considerations

When using do not eat, drink or smoke
Regular cleaning of equipment, work area and clothing is recommended
Avoid contact with skin, eyes or clothing
Wash hands thoroughly after handling
Keep away from food, drink and animal feedingstuffs

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place
Keep out of the reach of children
Keep in properly labelled containers
Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity)
Use spark-proof tools and explosion-proof equipment
Incompatible with oxidising agents
The product shall be stored in the original containers/vessels
Polymerisation is caused by ultra violet rays or heat. Store in a cool, dark and well-ventilated place. Containers/vessels should be tightly closed

7.3. Specific end use(s)

Other information

No information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical name	European Union	United Kingdom	France	Spain	Germany
Caprolactam	TWA: 10 mg/m^3 dust and vapour STEL 40 mg/m^3 dust and vapour	STEL: 3 mg/m^3 STEL: 20 mg/m^3 TWA: 1 mg/m^3 TWA: 10 mg/m^3	TWA: 10 mg/m^3 STEL: 40 mg/m^3	STEL: 40 mg/m^3 TWA: 10 mg/m^3	TWA: 5 mg/m^3 Ceiling / Peak: 10 mg/m^3
4-Methoxyphenol	-	-	TWA: 5 mg/m^3	TWA: 5 mg/m^3	-

Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Caprolactam	TWA: 10 mg/m^3 STEL: 40 mg/m^3	STEL: 40 mg/m^3 TWA: 10 mg/m^3	TWA: 20 mg/m^3 TWA: 1 mg/m^3	TWA: 10 mg/m^3 STEL: 40 mg/m^3	TWA: 2 ppm TWA: 10 mg/m^3 TWA: 1 mg/m^3
4-Methoxyphenol	-	TWA: 5 mg/m^3	-	-	TWA: 5 mg/m^3

Chemical name	Austria	Switzerland	Poland	Norway	Ireland	Sweden	Czech Republic	Luxembourg
Caprolactam	STEL: 40 mg/m^3 TWA: 5 mg/m^3	TWA: 5 mg/m^3	STEL: 15 mg/m^3 TWA: 5 mg/m^3	TWA: 10 ppm TWA: 40 mg/m^3 STEL: 60 mg/m^3 STEL: 15 ppm	TWA: 10 mg/m^3 STEL: 40 mg/m^3	5 mg/m^3 TLV NGV (dust and vapor) 40 mg/m^3 Binding STEL Bindande KGV (dust and vapor)	Ceiling: 3 mg/m^3 Ceiling: 40 mg/m^3 TWA: 1 mg/m^3 TWA: 10 mg/m^3	10 mg/m^3 TWA (powder and vapor) 40 mg/m^3 STEL (powder and vapor)
4-Methoxyphenol	STEL: 10 mg/m^3 TWA: 5 mg/m^3	-	TWA: 5 mg/m^3	TWA: 5 mg/m^3 STEL: 10 mg/m^3	TWA: 5 mg/m^3 STEL: 15 mg/m^3	-	-	-

Derived No Effect Level (DNEL)	No information available
Predicted No Effect Concentration (PNEC)	No information available

8.2. Exposure controls

Engineering controls	Ensure adequate ventilation, especially in confined areas Showers Eyewash stations Ventilation systems

Personal Protective Equipment

Eye/face Protection	Tight sealing safety goggles Face protection shield Wear safety glasses with side shields (or goggles)
Hand protection	Wear protective gloves
Skin and Body Protection	Suitable protective clothing Gloves made of plastic or rubber Wear suitable protective clothing Apron Protective shoes or boots
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment Respirator cartridge should be exchanged at regular intervals or at proper time according to breakthrough time
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained Do not allow into any sewer, on the ground or into any body of water Prevent product from entering drains

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	liquid		
appearance	No information available	**Odour**	characteristic odour
color	colored	**odour threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	not applicable	
Melting point/freezing point	no data available	
Boiling point/boiling range	no data available	No information available
Flash Point	≧94℃	Ceta Closed Cup
Evaporation Rate	no data available	No information available
Combustibility	no data available	
Flammability Limits in Air		
Upper flammability limits	no data available	

Lower Flammability Limit	no data available	
vapour pressure	no data available	No information available
Vapour density	no data available	No information available
Relative Density	1.00-1.10	
solubility(ies)		
Water solubility	Immiscible in water	
Organic Solvent Solubility	soluble in organic solvents	
Partition coefficient	no data available	No information available
Autoignition temperature	no data available	No information available
decomposition temperature	no data available	No information available
Kinematic viscosity	no data available	
Explosive properties	No information available	
Oxidising properties	No information available	
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

softening point	no data available
density	no data available

Chemical name	Boiling point °C	density	Vapour pressure	Vapour density	Flash Point	Autoignition temperature
2-Propenoic acid, phenylmethyl ester	228 °C 1013.25 hPa	1.0573 g/cm3 at 20 °C	-	-	-	-
Bis(2-ethylhexyl)-2-butenedioate	164 °C 10 mmHg	0.94 g/cm3 at 20 °C	<0.01 hPa at 20 °C	-	185 °C	-
Caprolactam	270 °C	1.014 g/cm3 at 80 °C	0.0014 hPa at 20 °C	-	152 °C closed cup	395 °C
1,6-Hexanediol diacrylate	-	-	0.0005 mmHg at 21 °C	-	132 °C closed cup	-
4-Methoxyphenol	243 - 246 °C	-	-	4.3	132 °C open cup	421 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity no data available

10.2. Chemical stability

stability Stable under normal conditions
Polymerisation can occur
Heating may cause an explosion

Explosion data

Sensitivity to Mechanical Impact May be ignited by heat, sparks or flames
Sensitivity to Static Discharge May be ignited by heat, sparks or flames

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No information available

10.4. Conditions to avoid

Conditions to Avoid Take precautionary measures against static discharges
Extremes of temperature and direct sunlight
Heat

10.5. Incompatible materials

Incompatible Materials Strong acids; OXIDISERS; alkali; light; peroxides; radical initiators; Heat

10.6. Hazardous decomposition products

Hazardous decomposition products May emit toxic fumes under fire conditions

SECTION 11: Toxicological information

Repeated or prolonged contact may cause allergic reactions in very susceptible persons
May cause sensitisation by skin contact

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

Acute Toxicity

inhalation	Reference to other sections; 4
Eye Contact	Reference to other sections; 4
Skin contact	Reference to other sections; 4
INGESTION	Reference to other sections; 4

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,325.90 mg/kg
ATEmix (dermal)	2,313.90 mg/kg

Unknown acute toxicity

11.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
55.7 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
96.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
90.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
89.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)

Chemical name	Oral LD50	dermal LD50	Inhalation LC50	Classification according to Regulation (EC) No. 1272/2008 [CLP] / Other	Japan GHS Classification / Other
2-Propenoic acid, phenylmethyl ester	-	-	-	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Skin Irrit. 2 Skin Sens. 1B Aquatic Acute 1 Aquatic Chronic 1
2H-Azepin-2-one, 1-ethenylhexahydro-	-	-	-	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Skin Sens. 1B (H317) STOT RE 1 (H372)	Acute Tox. Oral 4 Eye Irrit. 2 Skin Sens. 1B STOT RE 1
Morpholine, 4-(1-oxo-2-propenyl)-	-	-	-	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	-
2-Propenoic acid,	4890 mg/kg	> 5 g/kg (Rabbit)	-	Acute Tox. 5 (H303)	Skin Irrit. 2

1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	(Rat)			Acute Tox. 5 (H313) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Eye Irrit. 2 Skin Sens. 1A STOT SE 3 Aquatic Acute 1 Aquatic Chronic 1
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	-	-	-	Repr. 2 (H361)	-
Trimethylolpropane polyoxyethylene triacrylate	-	> 13 g/kg (Rabbit)	-	Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Chronic 3 (H412)	Eye Irrit. 2 Skin Sens. 1B Aquatic Chronic 3
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	-	-	-	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) Aquatic Chronic 2 (H411)	Acute Tox. Oral 4 Acute Tox. Der. 3 Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1A Aquatic Chronic 2
Benzene, ethenyl-, copolymer with 2,5-Furandione and Benzene, 1,1'-(1,1-dimethyl-3-methylene-1,3-propanediyl)bis-, rp. with Oxirane,methyl, polymer with oxirane, 2-aminopropyl methyl ether and 1,3-Propanediamine, N,N-dimethyl-, Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. - quaternised, compound with Benzoic acid	-	-	-	Aquatic Acute 1 (H400)	Aquatic Acute 1
Bis(2-ethylhexyl)-2-butenedioate	14 g/kg (Rat)	14415 mg/kg (Rabbit) 15 mL/kg (Rabbit)	-	Skin Sens. 1B (H317) Aquatic Acute 3 (H402) Aquatic Chronic 1 (H410)	Skin Sens. 1B Aquatic Acute 3 Aquatic Chronic 1
Caprolactam	1210 mg/kg (Rat)	1410 µL/kg (Rabbit) 1438 mg/kg (Rabbit)	8.16 mg/L (Rat) 4 h	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Acute Tox. 4 (H312) Repr. 2 (H361) STOT RE 1 (H372)	Repr. 2 Skin Irrit. 2 Eye Irrit. 2 STOT RE 1 STOT SE 2 STOT SE 3 Acute Tox. Der. 4 Acute Tox. Oral 4
1,6-Hexanediol diacrylate	5 g/kg (Rat)	3600 µL/kg (Rabbit) 3600 mg/kg (Rabbit)	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	-	-	-	Eye Irrit. 2A (H319) Skin Sens. 1 (H317)	Eye Irrit. 2A Skin Sens. 1
2,5-Cyclohexadien-1-one, 2,6-bis(1,1-dimethylethyl)-4-(phenylmethylene)-	-	-	-	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	-
4-Methoxyphenol	1600 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Carc. 2 (H351) Repr. 2 (H361) Aquatic Acute 2 (H401)	Acute Tox. Oral 4 Skin Irrit. 2 Eye Irrit. 2B Skin Sens. 1 Carc. 2 Repr. 2 Aquatic Acute 2

GHS/CLP Classification Note:

Acute Tox. Der. :Acute toxicity - Dermal, Acute Tox. Inh. (D/M) :Acute toxicity - Inhalation - Dusts and Mists, Acute Tox. Inh. (Gas) :Acute toxicity - Inhalation - Gases, Acute Tox. Inh. (Vap) :Acute toxicity - Inhalation - Vapours, Acute Tox. Oral :Acute toxicity - Oral, Aquatic Acute :Acute Hazardous to the aquatic environment, Aquatic Chronic :Chronic Hazardous to the aquatic

environment, Asp. Tox. :Aspiration hazard, Carc. :Carcinogenicity, Expl. :Explosives, Eye Dam. :Serious eye damage, Eye Irrit. :Eye irritation, Flam. Gas :Flammable gases (including chemically unstable gases), Flam. Liq. :Flammable liquids, Flam. Solid :Flammable solids, Lact. :Effects on or via lactation, Met. Corr. :Corrosive to metals, Muta. :Germ cell mutagenicity, Org. Perox. :Organic peroxides, Ox. Gas :Oxidizing gases, Ox. Liq. :Oxidizing liquids, Ox. Sol. :Oxidizing solids, Press. Gas :Gases under pressure, Pyr. Liq. :Pyrophoric liquids, Pyr. Sol. :Pyrophoric solids, Repr. :Reproductive toxicity, Resp. Sens. :Respiratory sensitization, Self-heat. :Self-heating substances and mixtures, Self-react. :Self-reactive substances and mixtures, Skin Corr. :Skin corrosion, Skin Irrit. :Skin irritation, Skin Sens. :Skin sensitization, STOT RE :Specific target organ toxicity – Repeated exposure, STOT SE :Specific target organ toxicity – Single exposure, Water-react. :Substances and mixtures which, in contact with water emit flammable gases

Delayed and immediate effects as well as chronic effects from short and long-term exposure

skin corrosion/irritation	No information available
Serious eye damage/eye irritation	No information available
Respiratory or skin sensitisation	No information available
Germ Cell Mutagenicity	No information available
Carcinogenicity	No information available
Reproductive Toxicity	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Aspiration Hazard	No information available

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties	No information available

11.2.2. Other information

Other adverse effects	No information available

SECTION 12: Ecological information

12.1. Toxicity

Unknown aquatic toxicity	42.0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

12.2. Persistence and degradability

Persistence and degradability	No information available

12.3. Bioaccumulative potential

Bioaccumulation No information available

Chemical name	Partition coefficient
Caprolactam	-0.02
4-Methoxyphenol	1.3

12.4. Mobility in soil

Mobility in soil No information available

12.5. Results of PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
2-Propenoic acid, phenylmethyl ester	The substance is not PBT / vPvB
2H-Azepin-2-one, 1-ethenylhexahydro-	The substance is not PBT / vPvB
Morpholine, 4-(1-oxo-2-propenyl)-	The substance is not PBT / vPvB
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	The substance is not PBT / vPvB
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	The substance is not PBT / vPvB
Trimethylolpropane polyoxyethylene triacrylate	The substance is not PBT / vPvB
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	The substance is not PBT / vPvB
Bis(2-ethylhexyl)-2-butenedioate	The substance is not PBT / vPvB
Caprolactam	The substance is not PBT / vPvB
1,6-Hexanediol diacrylate	The substance is not PBT / vPvB
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	The substance is not PBT / vPvB
2,5-Cyclohexadien-1-one, 2,6-bis(1,1-dimethylethyl)-4-(phenylmethylene)-	The substance is not PBT / vPvB
4-Methoxyphenol	The substance is not PBT / vPvB

Other information No information available

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available

12.7. Other adverse effects

Other adverse effects No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Products Should not be released into the environment
Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal

Other information Waste codes should be assigned by the user based on the application for which the product was used
Store in a tightly sealed drum to prevent the spillage of the content

SECTION 14: Transport information

Containers/vessels must be leakage-free. Loading must be done to prevent containers from falling, dropping down and being damaged
Take necessary steps to prevent collapse
Use opaque containers/vessels for storage and transport

UN number	UN3082
Packing group	III
ERG Code	171
Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s

IMDG

14.1 UN number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s
14.3 Hazard Class	9
14.4 Packing group	III
Environmental hazard	Yes
14.6 Special Provisions	None
EmS-No	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

RID

14.1 UN number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s
14.3 Hazard Class	9
14.4 Packing group	III
14.5 Environmental hazard	Yes
Classification code	M6
14.6 Special Provisions	None

ADR

14.1 UN number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s
14.3 Hazard Class	9
Labels	9
14.4 Packing group	III
14.5 Environmental hazard	Yes
14.6 Special Provisions	None
Classification code	M6

ICAO (air)

14.1 UN number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s
14.3 Hazard Class	9
14.4 Packing group	III
14.5 Environmental hazard	Yes
14.6 Special Provisions	None

IATA

14.1 UN number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s
14.3 Hazard Class	9

14.4	**Packing group**	III
14.5	**Environmental hazard**	Yes
14.6	**Special Provisions**	None
	ERG Code	9L

SECTION 15: Regulatory information

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

Chemical name	CAS No	French RG number	Seveso III Derective
2-Propenoic acid, phenylmethyl ester	2495-35-4	-	No information available
2H-Azepin-2-one, 1-ethenylhexahydro-	2235-00-9	-	No information available
Morpholine, 4-(1-oxo-2-propenyl)-	5117-12-4	-	No information available
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	5888-33-5	-	No information available
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	75980-60-8	-	No information available
Trimethylolpropane polyoxyethylene triacrylate	28961-43-5	-	No information available
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	7328-17-8	-	No information available
Benzene, ethenyl-, copolymer with 2,5-Furandione and Benzene, 1,1'-(1,1-dimethyl-3-methylene-1,3-propanediyl)bis-, rp. with Oxirane,methyl, polymer with oxirane, 2-aminopropyl methyl ether and 1,3-Propanediamine, N,N-dimethyl-, Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. - quaternised, compound with Benzoic acid	-	-	No information available
Bis(2-ethylhexyl)-2-butenedioate	142-16-5	-	No information available
Caprolactam	105-60-2	-	No information available
1,6-Hexanediol diacrylate	13048-33-4	-	No information available
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	52408-84-1	-	No information available
2,5-Cyclohexadien-1-one, 2,6-bis(1,1-dimethylethyl)-4-(phenylmethylene)-	7078-98-0	-	No information available
4-Methoxyphenol	150-76-5	RG 65	No information available

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

SVHC Substances	Substances in candidate list (Art. 59 Reg. 1907/2006, REACH): Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide SVHC
Authorisations and/or restrictions on use:	This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed
H303 - May be harmful if swallowed

H311 - Toxic in contact with skin
H312 - Harmful in contact with skin
H313 - May be harmful in contact with skin
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
H351 - Suspected of causing cancer
H361 - Suspected of damaging fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
H400 - Very toxic to aquatic life
H401 - Toxic to aquatic life
H402 - Harmful 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

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data LOLI Database (ChemADVISOR, Inc.)

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet