

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

### 1.1. Product Identifier

**Product name** T53R1  
UFI:25NW-9KD6-PJ03-WU8J

**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

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

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

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**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

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## 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)	-
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)	-
Trimethylolpropane polyoxyethylene triacrylate	-	28961-43-5	1-5	Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Chronic 3 (H412)	-
Carbon black	215-609-9	1333-86-4	1-5	STOT RE 1 (H372)	-
Bis(2-ethylhexyl)-2-butenedioate	205-524-5	142-16-5	1-5	Skin Sens. 1B (H317) Aquatic Acute 3 (H402) Aquatic Chronic 1 (H410)	-
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	-	-	< 1	Aquatic Acute 1 (H400)	-

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oxirane, 2-aminopropyl methyl ether and 1,3-Propanediamine, N,N-dimethyl-, Oxirane, mono[(C10-16-alkyloxy)methyl] derivs. - quaternised, compound with Benzoic acid					
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)	-
Poly[oxy(methyl-1,2-ethanediy l)], .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)	-
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)	-
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

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**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<sub>2</sub>, 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

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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

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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
Carbon black	-	STEL: 7 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
Caprolactam	TWA: 10 mg/m <sup>3</sup> dust and vapour STEL 40 mg/m <sup>3</sup> dust	STEL: 3 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 40 mg/m <sup>3</sup>	STEL: 40 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> Ceiling / Peak: 10 mg/m <sup>3</sup>

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	and vapour	TWA: 10 mg/m <sup>3</sup>			
4-Methoxyphenol	-	-	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	-

Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Carbon black	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
Caprolactam	TWA: 10 mg/m <sup>3</sup> STEL: 40 mg/m <sup>3</sup>	STEL: 40 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 40 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 10 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
4-Methoxyphenol	-	TWA: 5 mg/m <sup>3</sup>	-	-	TWA: 5 mg/m <sup>3</sup>

Chemical name	Austria	Switzerland	Poland	Norway	Ireland	Sweden	Czech Republic	Luxembourg
Carbon black	-	-	TWA: 4 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>	3 mg/m <sup>3</sup> TLV NGV (inhalable fraction)	TWA: 2.0 mg/m <sup>3</sup>	-
Caprolactam	STEL: 40 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	STEL: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 40 mg/m <sup>3</sup> STEL: 60 mg/m <sup>3</sup> STEL: 15 ppm	TWA: 10 mg/m <sup>3</sup> STEL: 40 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> TLV NGV (dust and vapor) 40 mg/m <sup>3</sup> Binding STEL Bindande KGV (dust and vapor)	Ceiling: 3 mg/m <sup>3</sup> Ceiling: 40 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> TWA (powder and vapor) 40 mg/m <sup>3</sup> STEL (powder and vapor)
4-Methoxyphenol	STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>	-	-	-

**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



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**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**

<b>Physical State</b>	liquid		
<b>appearance</b>	No information available	<b>Odour</b>	characteristic odour
<b>color</b>	colored	<b>odour threshold</b>	No information available
<b><u>Property</u></b>		<b><u>Values</u></b>	
<b>pH</b>	not applicable	<b><u>Remarks • Method</u></b>	
<b>Melting point/freezing point</b>	no data available		
<b>Boiling point/boiling range</b>	no data available	No information available	
<b>Flash Point</b>	≥94°C	Ceta Closed Cup	
<b>Evaporation Rate</b>	no data available	No information available	
<b>Combustibility</b>	no data available		
<b>Flammability Limits in Air</b>			
<b>Upper flammability limits</b>	no data available		
<b>Lower Flammability Limit</b>	no data available		
<b>vapour pressure</b>	no data available	No information available	
<b>Vapour density</b>	no data available	No information available	
<b>Relative Density</b>	1.00-1.10		
<b>solubility(ies)</b>			
<b>Water solubility</b>	Immiscible in water		
<b>Organic Solvent Solubility</b>	soluble in organic solvents		
<b>Partition coefficient</b>	no data available	No information available	
<b>Autoignition temperature</b>	no data available	No information available	
<b>decomposition temperature</b>	no data available	No information available	
<b>Kinematic viscosity</b>	no data available		
<b>Explosive properties</b>	No information available		
<b>Oxidising properties</b>	No information available		
<b>Particle characteristics</b>			
<b>Particle Size</b>	No information available		
<b>Particle Size Distribution</b>	No information available		

**9.2. Other information**

<b>softening point</b>	no data available
<b>density</b>	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	-	-	-	-
Carbon black	-	1.86 g/cm3	-	-	-	-
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

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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

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ATEmix (oral) 1,573.50 mg/kg  
 ATEmix (dermal) 2,279.80 mg/kg

**Unknown acute toxicity**

10.0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 56.5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 98.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 94.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)  
 90.2 % 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, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	4890 mg/kg (Rat)	> 5 g/kg (Rabbit)	-	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)	Skin Irrit. 2 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)	-
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
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
Carbon black	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-	STOT RE 1 (H372)	STOT RE 1 Self-heat. 1 Self-heat. 2
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	Skin Sens. 1B Aquatic Acute 3 Aquatic Chronic 1

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				(H410)	
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
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
Poly[oxy(methyl-1,2-ethanediy)], .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
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
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

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<b>Serious eye damage/eye irritation</b>	No information available
<b>Respiratory or skin sensitisation</b>	No information available
<b>Germ Cell Mutagenicity</b>	No information available
<b>Carcinogenicity</b>	No information available
<b>Reproductive Toxicity</b>	No information available
<b>STOT - single exposure</b>	No information available
<b>STOT - repeated exposure</b>	No information available
<b>Aspiration Hazard</b>	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** 41.6% 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

<b>Chemical name</b>	<b>Partition coefficient</b>
Caprolactam	-0.02
4-Methoxyphenol	1.3

### **12.4. Mobility in soil**

**Mobility in soil** No information available

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## 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
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	The substance is not PBT / vPvB
Trimethylolpropane polyoxyethylene triacrylate	The substance is not PBT / vPvB
Carbon black	The substance is not PBT / vPvB
Bis(2-ethylhexyl)-2-butenedioate	The substance is not PBT / vPvB
Caprolactam	The substance is not PBT / vPvB
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[o mega.-[(1-oxo-2-propenyl)oxy]-	The substance is not PBT / vPvB
1,6-Hexanediol diacrylate	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

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### 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 Directive
2-Propenoic acid, phenylmethyl ester	2495-35-4	-	No information available

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2H-Azepin-2-one, 1-ethenylhexahydro-Morpholine, 4-(1-oxo-2-propenyl)-	2235-00-9	-	No information available
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	5117-12-4	-	No information available
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	5888-33-5	-	No information available
2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester	75980-60-8	-	No information available
Trimethylolpropane polyoxyethylene triacrylate	7328-17-8	-	No information available
Carbon black	28961-43-5	-	No information available
Bis(2-ethylhexyl)-2-butenedioate	1333-86-4	RG 16, RG 16bis	No information available
Benzene, ethenyl-, copolymer with 2,5-Furandione and Benzene, 1,1'-(1,1-dimethyl-3-methylene-1,3-propane diyl)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	142-16-5	-	No information available
Caprolactam	-	-	No information available
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha. -1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propenyl)oxy]-	105-60-2	-	No information available
1,6-Hexanediol diacrylate	52408-84-1	-	No information available
2,5-Cyclohexadien-1-one, 2,6-bis(1,1-dimethylethyl)-4-(phenylmethylene)-	13048-33-4	-	No information available
4-Methoxyphenol	7078-98-0	-	No information available
	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



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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.)

### Issue date

21-Jan-2020 (DD-MM-YYYY)

### Revision date

10-Apr-2024

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

### Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

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**End of Safety Data Sheet**