Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-CY

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 1-vinylhexahydro-2H-azepin-2-one; benzyl acrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	> 50 – ≤ 60 Wt %
CAS No.: 15625-89-5 **EC No.:** 239-701-3	**2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	> 10 – ≤ 20 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	< 10 Wt %
CAS No.: 2235-00-9 **EC No.:** 218-787-6	**1-vinylhexahydro-2H-azepin-2-one** Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, STOT RE 1 **Danger** H302-H317-H319-H372	< 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	> 1 – ≤ 10 Wt %
CAS No.: 162881-26-7 **EC No.:** 423-340-5	**phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide** Skin Sens. 1, Aquatic Chronic 4 **Warning** H317-H413	> 1 – ≤ 10 Wt %

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
	Copolymer with pigments affinic groups Aquatic Acute 1 H400	< 1 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:
Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:
Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:
Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Protective measures
Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.
Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. Occupational exposure limit values
No data available
8.1.2. biological limit values
No data available
8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate CAS No.: 15625-89-5	16.2 mg/m³	① DNEL worker ② DNEL acute inhalative (systemic)
1-vinylhexahydro-2H-azepin-2-one CAS No.: 2235-00-9	4.9 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS No.: 162881-26-7	21 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls
8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.
8.2.2. Personal protection equipment
Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing.
Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid
Colour: light blue
Odour: characteristic
Odour threshold: No information available.

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not applicable*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	≥ 70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*			

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
There are no data available on the mixture itself.
Acute dermal toxicity:
There are no data available on the mixture itself.
Acute inhalation toxicity:
There are no data available on the mixture itself.
Skin corrosion/irritation:
Causes skin irritation.
Eye damage/irritation:
Causes serious eye irritation.
Respiratory or skin sensitisation:
Skin sensitisation
Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.
Carcinogenicity:
No indication of human carcinogenicity.
Reproductive toxicity:
May damage fertility. May damage the unborn child.
STOT-single exposure:
May cause respiratory irritation.
STOT-repeated exposure:
Causes damage to liver through prolonged or repeated exposure if inhaled.
Aspiration hazard:
There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
There are no data available on the mixture itself.
Assessment/classification:
May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability
Additional information:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant

14.2. UN proper shipping name
not relevant

14.3. Transport hazard class(es)
not relevant

14.4. Packing group
not relevant

14.5. Environmental hazards
not relevant

14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation
No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation
5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:
2 - deutlich wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany-

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-MG

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 1-vinylhexahydro-2H-azepin-2-one; benzyl acrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	30 – 50 Wt %
CAS No.: 15625-89-5 **EC No.:** 239-701-3	**2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	11 – 20 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	5 – 10 Wt %
CAS No.: 2235-00-9 **EC No.:** 218-787-6	**1-vinylhexahydro-2H-azepin-2-one** Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, STOT RE 1 **Danger** H302-H317-H319-H372	5 – 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	3 – 5 Wt %
CAS No.: 162881-26-7 **EC No.:** 423-340-5	**phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide** Skin Sens. 1, Aquatic Chronic 4 **Warning** H317-H413	3 – 5 Wt %

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
	Copolymer with pigments affinic groups Aquatic Acute 1 H400	0 – 1 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:

Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:

Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Protective measures
Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.
Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. Occupational exposure limit values
No data available

8.1.2. biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate CAS No.: 15625-89-5	16.2 mg/m³	① DNEL worker ② DNEL acute inhalative (systemic)
1-vinylhexahydro-2H-azepin-2-one CAS No.: 2235-00-9	4.9 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS No.: 162881-26-7	21 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls
8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment
Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing.
Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid **Colour:** red
Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not determined*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	**LD_{50} oral:** >5,000 mg/kg (Rat) OECD 401

Acute oral toxicity:
There are no data available on the mixture itself.

Acute dermal toxicity:
There are no data available on the mixture itself.

Acute inhalation toxicity:
There are no data available on the mixture itself.

Skin corrosion/irritation:
Causes skin irritation.

Eye damage/irritation:
Causes serious eye irritation.

Respiratory or skin sensitisation:
Skin sensitisation

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
No indication of human carcinogenicity.

Reproductive toxicity:
May damage fertility. May damage the unborn child.

STOT-single exposure:
May cause respiratory irritation.

STOT-repeated exposure:
Causes damage to liver through prolonged or repeated exposure if inhaled.

Aspiration hazard:
There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
There are no data available on the mixture itself.

12.2. Persistence and degradability
Biodegradation:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation
No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:

keine Angabe

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-YE

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium

Telephone: +32 14 57 59 11

E-mail: info@rolanddg.be

Website: www.rolanddg.be

E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 1-vinylhexahydro-2H-azepin-2-one; benzyl acrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	30 – 51 Wt %
CAS No.: 15625-89-5 **EC No.:** 239-701-3	**2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	11 – 20 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	5 – 10 Wt %
CAS No.: 2235-00-9 **EC No.:** 218-787-6	**1-vinylhexahydro-2H-azepin-2-one** Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, STOT RE 1 **Danger** H302-H317-H319-H372	5 – 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	3 – 5 Wt %
CAS No.: 162881-26-7 **EC No.:** 423-340-5	**phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide** Skin Sens. 1, Aquatic Chronic 4 **Warning** H317-H413	3 – 5 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:
Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:
Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:
Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.

Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values
No data available

8.1.2. biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate CAS No.: 15625-89-5	16.2 mg/m³	① DNEL worker ② DNEL acute inhalative (systemic)
1-vinylhexahydro-2H-azepin-2-one CAS No.: 2235-00-9	4.9 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS No.: 162881-26-7	21 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment
Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing.
Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid **Colour:** yellow
Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not determined*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
There are no data available on the mixture itself.
Acute dermal toxicity:
There are no data available on the mixture itself.
Acute inhalation toxicity:
There are no data available on the mixture itself.
Skin corrosion/irritation:
Irritating to skin.
Eye damage/irritation:
Causes serious eye irritation.
Respiratory or skin sensitisation:
Skin sensitisation
Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.
Carcinogenicity:
No indication of human carcinogenicity.
Reproductive toxicity:
May damage fertility. May damage the unborn child.
STOT-single exposure:
May cause respiratory irritation.
STOT-repeated exposure:
Causes damage to liver through prolonged or repeated exposure if inhaled.
Aspiration hazard:
There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity
Assessment/classification:
There are no data available on the mixture itself.

12.2. Persistence and degradability
Biodegradation:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant

14.2. UN proper shipping name
not relevant

14.3. Transport hazard class(es)
not relevant

14.4. Packing group
not relevant

14.5. Environmental hazards
not relevant

14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation
No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation
5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:
keine Angabe

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany-

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-BK

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium
Telephone: +32 14 57 59 11
E-mail: info@rolanddg.be
Website: www.rolanddg.be
E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 1-vinylhexahydro-2H-azepin-2-one; benzyl acrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	30 – 50 Wt %
CAS No.: 15625-89-5 **EC No.:** 239-701-3	**2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	11 – 20 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	5 – 10 Wt %
CAS No.: 2235-00-9 **EC No.:** 218-787-6	**1-vinylhexahydro-2H-azepin-2-one** Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, STOT RE 1 **Danger** H302-H317-H319-H372	5 – 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	3 – 5 Wt %
CAS No.: 162881-26-7 **EC No.:** 423-340-5	**phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide** Skin Sens. 1, Aquatic Chronic 4 **Warning** H317-H413	3 – 5 Wt %

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
	Copolymer with pigments affinic groups Aquatic Acute 1 H400	0 – 1 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:

Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:

Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:

Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Protective measures
Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.
Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. Occupational exposure limit values
No data available

8.1.2. biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate CAS No.: 15625-89-5	16.2 mg/m³	① DNEL worker ② DNEL acute inhalative (systemic)
1-vinylhexahydro-2H-azepin-2-one CAS No.: 2235-00-9	4.9 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS No.: 162881-26-7	21 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls
8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment
Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing.
Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid **Colour:** black
Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not determined*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
There are no data available on the mixture itself.
Acute dermal toxicity:
There are no data available on the mixture itself.
Acute inhalation toxicity:
There are no data available on the mixture itself.
Skin corrosion/irritation:
Causes skin irritation.
Eye damage/irritation:
Causes serious eye irritation.
Respiratory or skin sensitisation:
Skin sensitisation
Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.
Carcinogenicity:
No indication of human carcinogenicity.
Reproductive toxicity:
May damage fertility. May damage the unborn child.
STOT-single exposure:
May cause respiratory irritation.
STOT-repeated exposure:
Causes damage to liver through prolonged or repeated exposure if inhaled.
Aspiration hazard:
There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
There are no data available on the mixture itself.
Assessment/classification:
May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability
Additional information:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant

14.2. UN proper shipping name
not relevant

14.3. Transport hazard class(es)
not relevant

14.4. Packing group
not relevant

14.5. Environmental hazards
not relevant

14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation
No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation
5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:
keine Angabe

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany-

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-GL

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium
Telephone: +32 14 57 59 11
E-mail: info@rolanddg.be
Website: www.rolanddg.be
E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Warning

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 1-vinylhexahydro-2H-azepin-2-one; benzyl acrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	> 40 – ≤ 50 Wt %
CAS No.: 15625-89-5 **EC No.:** 239-701-3	**2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	> 20 – ≤ 30 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	< 10 Wt %
CAS No.: 2235-00-9 **EC No.:** 218-787-6	**1-vinylhexahydro-2H-azepin-2-one** Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, STOT RE 1 **Danger** H302-H317-H319-H372	< 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	> 1 – ≤ 10 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:
Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:
Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:
Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.

Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values
No data available

8.1.2. biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate CAS No.: 15625-89-5	16.2 mg/m³	① DNEL worker ② DNEL acute inhalative (systemic)
1-vinylhexahydro-2H-azepin-2-one CAS No.: 2235-00-9	4.9 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment
Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing.
Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid **Colour:** clear
Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not applicable*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	≥ 70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity				

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
There are no data available on the mixture itself.
Acute dermal toxicity:
There are no data available on the mixture itself.
Acute inhalation toxicity:
There are no data available on the mixture itself.
Skin corrosion/irritation:
Causes skin irritation.
Eye damage/irritation:
Causes serious eye irritation.
Respiratory or skin sensitisation:
Skin sensitisation
Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.
Carcinogenicity:
No indication of human carcinogenicity.
Reproductive toxicity:
May damage fertility. May damage the unborn child.
STOT-single exposure:
May cause respiratory irritation.
STOT-repeated exposure:
Causes damage to liver through prolonged or repeated exposure if inhaled.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
There are no data available on the mixture itself.
Assessment/classification:
May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability
Additional information:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant

14.2. UN proper shipping name
not relevant

14.3. Transport hazard class(es)
not relevant

14.4. Packing group
not relevant

14.5. Environmental hazards
not relevant

14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation
No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation
5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:
2 - deutlich wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	
STOT-repeated exposure *(STOT RE 2)*	H373: May cause damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany-

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

ECO-UV, EUV4-WH

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

Use of the substance/mixture:

Inkjet Printing
Identified uses: Inkjet Printing
Restricted to professional users.
Uses advised against: -

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Roland DG Benelux NV
Bell-Telephonelaan 2G
B-2440 Geel
Belgium
Telephone: +32 14 57 59 11
E-mail: info@rolanddg.be
Website: www.rolanddg.be
E-mail (competent person): info@rolanddg.be

1.4. Emergency telephone number

24h: +49 228 19240 (Giftnotruf Bonn), +32 14 57 59 11 (Roland DG Benelux NV) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.

2.2. Label elements

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

Hazard pictograms:

GHS05
Corrosion

GHS07
Exclamation mark

GHS08
Health hazard

Signal word: Danger

Hazard components for labelling:

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; oxybis(methyl-2,1-ethanediyl) diacrylate; benzyl acrylate; tetrahydrofurfuryl acrylate

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

hazard statements for health hazards	
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements Response	
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Precautionary statements Disposal	
P501.1	Dispose of contents/container to industrial incineration plant.

Special rules for supplemental label elements for certain mixtures:
10,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).
10,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (inhalative).

2.3. Other hazards

Adverse physicochemical effects:
No information available.

Adverse human health effects and symptoms:
No information available.

Adverse environmental effects:
No information available.

Other adverse effects:
No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 2495-35-4 **EC No.:** 219-673-9	**benzyl acrylate** STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319-H335-H411	27 – 45 Wt %
CAS No.: 57472-68-1 **EC No.:** 260-754-3	**oxybis(methyl-2,1-ethanediyl) diacrylate** Eye Dam. 1, Skin Irrit. 2, Skin Sens. 1 **Danger** H315-H317-H318	15 – 25 Wt %
CAS No.: 2399-48-6 **EC No.:** 219-268-7	**tetrahydrofurfuryl acrylate** Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1 **Warning** H315-H317-H319	6 – 10 Wt %
CAS No.: 75980-60-8 **EC No.:** 278-355-8 **REACH No.:** 01-2119972295-29	**diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide** Repr. 2, Skin Sens. 1, Aquatic Chronic 2 **Warning** H317-H361f-H411	6 – 10 Wt %
CAS No.: 162881-26-7 **EC No.:** 423-340-5	**phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide** Skin Sens. 1, Aquatic Chronic 4 **Warning** H317-H413	6 – 10 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Provide fresh air.
Consult physician immediately.
In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap.
In case of skin irritation, consult a physician.
IF ON CLOTHING: Remove contaminated clothing immediatley and dispose of safely.

After eye contact:
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion:
Consult physician immediately.
Do NOT induce vomiting.
Give nothing to eat or drink.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO2) Foam Dry extinguishing powder

Unsuitable extinguishing media:
Water

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Toxic gases/vapors.

5.3. Advice for firefighters

Wear full chemical protective clothing. Use appropriate respiratory protection.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:
Wear personal protection equipment.
See protective measures under point 7 and 8.
Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

6.5. Additional information
No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:
Use only in well-ventilated areas.
Handle and open container with care.
All work processes must always be designed so that the following is excluded:
Eye contact, Skin contact, Inhalation.
When using do not eat, drink, smoke, sniff.

Fire prevent measures:
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)
Recommendation:
Inkjet Printing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values
No data available

8.1.2. biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8	3.5 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide CAS No.: 162881-26-7	21 mg/m³	① DNEL worker ② DNEL long-term inhalative (systemic)

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Provide adequate ventilation as well as local exhaustion at critical locations.

8.2.2. Personal protection equipment

Eye/face protection:
Tightly sealed safety glasses.

Skin protection:
Thorough skin-cleansing after handling the product.
Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
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.
Suitable material: PVA (Polyvinyl alcohol)
Thickness of the glove material: 0,7 mm
Breakthrough time (maximum wearing time): > 480 min

Respiratory protection:
Respiratory protection necessary at:
insufficient ventilation
insufficient exhaust
Suitable respiratory protection apparatus:
Half-masks (DIN EN 140).

Other protection measures:
Protective clothing: For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).
General health and safety measures: When using do not eat, drink, smoke, sniff. Thorough skin-cleansing after handling the product. Street clothing should be stored seperately from work clothing. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid
Colour: white
Odour: characteristic
Odour threshold: No information available.

Safety relevant basis data

parameter		at °C	Method	remark
pH	*not determined*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	70 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	= 1.1			
Bulk density	*not determined*			
Water solubility (g/L)	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
UV-radiation/sunlight, Heat: Danger of polymerisation

10.2. Chemical stability
Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat
UV-radiation/sunlight

10.5. Incompatible materials
Acid Amines Radical former Oxidising agent

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx) Phosphorus oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute oral toxicity:
There are no data available on the mixture itself.

Acute dermal toxicity:
There are no data available on the mixture itself.

Acute inhalation toxicity:
There are no data available on the mixture itself.

Skin corrosion/irritation:
Irritating to skin.

Eye damage/irritation:
Causes serious eye irritation.

Respiratory or skin sensitisation:
Skin sensitisation

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
No indication of human carcinogenicity.

Reproductive toxicity:
May damage fertility. May damage the unborn child.

STOT-single exposure:
May cause respiratory irritation.

STOT-repeated exposure:
There are no data available on the mixture itself.

Aspiration hazard:
There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
There are no data available on the mixture itself.

Assessment/classification:
There are no data available on the mixture itself.

12.2. Persistence and degradability
Additional information:
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
There are no data available on the mixture itself.

12.4. Mobility in soil
There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Consult the appropriate local waste disposal expert about waste disposal.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Vorschlagsliste für Abfallschlüssel/Abfallbezeichnungen gemäß AVV:

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 03 17 *	waste printing toner containing dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

5 MuSchRiV. 22 JArbSchG. 4 MuSchRiV.

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Irrit. 2)*	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.
Reproductive toxicity *(Repr. 2)*	H361: Suspected of damaging fertility or the unborn child.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH
Department Environmental Service
Westendstraße 199
80686 Munich - Germany-