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# Safety Data Sheet

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

1.1. Product identifier

Mixture identification:

Trade name: Ink Cartridge, Photo Black, 700 T6941

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

Recommended use:

Ink for inkjet printing

1.3. Details of the supplier of the safety data sheet

Company:

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

Competent person responsible for the safety data sheet:

chemicals@epson-europe.com

Date: 19/10/2016

Revision: 1.0

1.4. Emergency telephone number

Phone number: +31-20-314-5000

Giftnotruf Berlin; +48 (0) 30 30686 790

## SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

EUH210 Safety data sheet available on request.
EUH208 Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.
EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

## SECTION 3: Composition/information on ingredients

3.1. Substances

No

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty | Name | Ident. Number | Classification |
|---|---|---|---|
| 50% ~ 65% | Water | CAS: 7732-18-5<br>EC: 231-791-2 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |
| 15% ~ 20% | Glycerol | CAS: 56-81-5<br>EC: 200-289-5 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |
| 1% ~ 3% | Carbon black | CAS: 1333-86-4<br>EC: 215-609-9 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |
| 1% ~ 3% | Triethanol amine | CAS: 102-71-6<br>EC: 203-049-8 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |
| 0.1% ~ 0.25% | 2,4,7,9-tetramethyldec-5-yne-4,7-diol | CAS: 126-86-3<br>EC: 204-809-1 | 3.3/1 Eye Dam. 1 H318<br>3.4.2/1B Skin Sens. 1B H317<br>4.1/C3 Aquatic Chronic 3 H412 |
| < 0.05% | 1,2-benzisothiazol-3(2H)-one;<br>1,2-benzisothiazolin-3-one | Index number: 613-088-00-6<br>CAS: 2634-33-5<br>EC: 220-120-9 | 3.1/4/Oral Acute Tox. 4 H302<br>3.2/2 Skin Irrit. 2 H315<br>3.3/1 Eye Dam. 1 H318<br>3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317<br>4.1/A1 Aquatic Acute 1 H400 |

## SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

Treatment:

None

## SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters
Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up
Wash with plenty of water.

6.4. Reference to other sections
See also section 8 and 13

## SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.

7.3. Specific end use(s)
None in particular

## SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Glycerol - CAS: 56-81-5
- OEL Type: OSHA - LTE: 5 mg/m3 - Notes: PEL, as mist, respirable fraction
- OEL Type: OSHA - LTE: 15 mg/m3 - Notes: PEL, as mist, total dust

Carbon black - CAS: 1333-86-4
- OEL Type: ACGIH - LTE: 3 mg/m3
- OEL Type: NIOSH - LTE: 3.5 mg/m3 - STE: 1750 mg/m3
- OEL Type: OSHA - LTE: 3.5 mg/m3

DNEL Exposure Limit Values
No data available

PNEC Exposure Limit Values
2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3

Target: Fresh Water - Value: 0.04 mg/l
Target: Marine water - Value: 0.004 mg/l
Target: Freshwater sediments - Value: 0.32 mg/kg
Target: Marine water sediments - Value: 0.032 mg/kg

8.2. Exposure controls

Eye protection:
Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:
No special precaution must be adopted for normal use.

Protection for hands:
Not needed for normal use.

Respiratory protection:
Not needed for normal use.

Thermal Hazards:
None

Environmental exposure controls:
None

Appropriate engineering controls:
None

## SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Appearance and colour: | Black Liquid |
| Odour: | Slightly |
| Odour threshold: | No data available |
| pH: | 8 ~ 9.4 at 20 °C |
| Melting point / freezing point: | No data available |
| Initial boiling point and boiling range: | No data available |
| Solid/gas flammability: | No data available |
| Upper/lower flammability or explosive limits: | No data available |
| Vapour density: | No data available |
| Flash point: | Does not flash until 100 °C / 212 ° F (closed cup method, ASTM D 3278) |
| Evaporation rate: | No data available |
| Vapour pressure: | No data available |
| Relative density: | No data available |
| Solubility in water: | Complete |
| Solubility in oil: | No data available |
| Partition coefficient (n-octanol/water): | No data available |
| Auto-ignition temperature: | No data available |
| Decomposition temperature: | No data available |
| Viscosity: | < 5 mPa·s at 20 °C |
| Explosive properties: | No data available |
| Oxidizing properties: | No data available |

9.2. Other information

| | |
|---|---|
| Miscibility: | No data available |
| Fat Solubility: | No data available |
| Conductivity: | No data available |

## SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions

10.2. Chemical stability
Stable under normal conditions

10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
Stable under normal conditions.
10.5. Incompatible materials
None in particular.
10.6. Hazardous decomposition products
None.

## SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological information of the mixture:
No data available
Toxicological information of the main substances found in the mixture:
Glycerol - CAS: 56-81-5
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Guinea pig = 7750 mg/kg - Source: Journal of Industrial Hygiene and Toxicology. Vol. 23, Pg. 259, 1941
Test: LDLo - Route: Oral - Species: Human = 1428 mg/kg - Source: "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 288, 1969. - Notes: BEHAVIORAL: HEADACHE GASTROINTESTINAL: NAUSEA OR VOMITING
Carbon black - CAS: 1333-86-4
a) acute toxicity:
Test: LD50 - Route: Dermal - Species: Rabbit > 3 g/kg - Source: Acute Toxicity Data. Journal of the American College of Toxicology, Part B. Vol. 15
Test: LD50 - Route: Oral - Species: Rat > 15400 mg/kg - Source: Acute Toxicity Data. Journal of the American College of Toxicology, Part B. Vol. 15
Triethanol amine - CAS: 102-71-6
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Guinea pig = 2200 mg/kg - Source: "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 114, 1982.
Test: LD50 - Route: Oral - Species: Mouse = 5846 mg/kg - Source: Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. Vol. 36(1-4), Pg. 10, 1989. - Notes: GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" KIDNEY, URETER, AND BLADDER: OTHER CHANGES BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD
2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3
a) acute toxicity:
Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg - Notes: OECD TG No.402
b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Mild irritant - Notes: OECD TG No.404
c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Highly irritating - Notes: EPA OTS 798.4500
d) respiratory or skin sensitisation:
Test: Skin Sensitisation - Route: LLNA - Species: Mouse Sensitiser - Notes: OECD TG No.429
e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium Negative - Notes: OECD TG No.471
Carbon black - CAS: 1333-86-4

With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this ink cartridge, emissions to air of carbon black during normal printing use have not been found. IARC, the International Agency for Research on Cancer, has found printing inks to be not classifiable as human carcinogens.

If not differently specified, the information required in Regulation (EU) 2015/830 listed below must be considered as 'No data available':

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

## SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.
2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 36 mg/l - Duration h: 96 - Notes: OECD TG No.203
Endpoint: EC50 - Species: Daphnia = 88 mg/l - Duration h: 48 - Notes: OECD TG No.202
Endpoint: EC50 - Species: Algae = 15 mg/l - Duration h: 72 - Notes: OECD TG No.201

c) Bacteria toxicity:

Endpoint: EC50 - Species: activated sludge = mg/l - Notes: OECD TG No.209

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

## SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

## SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

No data available

14.3. Transport hazard class(es)

No data available

14.4. Packing group

No data available

14.5. Environmental hazards

No data available

14.6. Special precautions for user

No data available

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available

## SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.
Regulation (EC) nr 648/2004 (detergents).
1999/13/EC (VOC directive)

Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):

No data available

15.2. Chemical safety assessment

No

## SECTION 16: Other information

Full text of phrases referred to in Section 3:

H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H400 Very toxic to aquatic life.

| Hazard class and hazard category | Code | Description |
|---|---|---|
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Skin Irrit. 2 | 3.2/2 | Skin irritation, Category 2 |
| Eye Dam. 1 | 3.3/1 | Serious eye damage, Category 1 |
| Skin Sens. 1,1A,1B | 3.4.2/1-1A-1B | Skin Sensitisation, Category 1,1A,1B |

| | | |
|---|---|---|
| Skin Sens. 1B | 3.4.2/1B | Skin Sensitisation, Category 1B |
| Aquatic Acute 1 | 4.1/A1 | Acute aquatic hazard, category 1 |
| Aquatic Chronic 3 | 4.1/C3 | Chronic (long term) aquatic hazard, category 3 |

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold
CCNL - Appendix 1
Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This Safety Data Sheet cancels and replaces any preceding release.

| | |
|---|---|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society). |
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| LTE: | Long-term exposure. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STE: | Short-term exposure. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWATLV: | Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). |
| WGK: | German Water Hazard Class. |