



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, Green, T6247/ICGR68
- 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: 29/05/2017
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)
 Warning, Skin Irrit. 2, Causes skin irritation.
 Danger, Repr. 1B, May damage fertility or the unborn child.
Adverse physicochemical, human health and environmental effects:
No other hazards

- 2.2. Label elements
Hazard pictograms:





- Danger
Hazard statements:
H315 Causes skin irritation.
H360 May damage fertility or the unborn child.
Precautionary statements:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with applicable regulations.
Special Provisions:

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- None
- Contents
Bis(2-(2-methoxyethoxy)ethyl) ether
- 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% | Bis(2-ethoxyethyl) ether | CAS: 112-36-7 EC: 203-963-7 REACH No.: 01-21199699 46-13 |  3.2/2 Skin Irrit. 2 H315 |
| 15% ~ 20% | gamma-Butyrolactone | CAS: 96-48-0 EC: 202-509-5 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |
| 12.5% ~ 15% | Bis(2-(2-methoxyethoxy)ethyl) ether | CAS: 143-24-8 EC: 205-594-7 REACH No.: 01-21199589 65-16 |  3.7/1B Repr. 1B H360 |
| 1% ~ 3% | Tetraethylene glycol monobutyl ether | CAS: 1559-34-8 EC: 216-322-1 | The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). |

SECTION 4: First aid measures

- 4.1. Description of first aid measures
- In case of skin contact:
Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.
- 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

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

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, carbon dioxide or alcohol-resistant foam.

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.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

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

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

Bis(2-ethoxyethyl) ether - CAS: 112-36-7

Worker Industry: 5.96 mg/m³ - Exposure: Human Inhalation

Worker Industry: 1.71 mg/kg/day - Exposure: Human Oral

Worker Professional: 50.05 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 3.43 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Bis(2-(2-methoxyethoxy)ethyl) ether - CAS: 143-24-8

Worker Professional: 22 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 3 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Bis(2-ethoxyethyl) ether - CAS: 112-36-7

Target: Fresh Water - Value: 0.001 mg/l

Target: Freshwater sediments - Value: 0.007 mg/kg

Target: Marine water - Value: 0.0001397 mg/l

Target: Marine water sediments - Value: 0.0006778 mg/kg

Target: Air - Value: 0.000001105 mg/m³

Bis(2-(2-methoxyethoxy)ethyl) ether - CAS: 143-24-8

Target: Fresh Water - Value: 32 mg/l

Target: Freshwater sediments - Value: 127 mg/kg

Target: Marine water - Value: 3.2 mg/l

Target: Marine water sediments - Value: 12.7 mg/kg

Target: Microorganisms in sewage treatments - Value: 500 mg/l

8.2. Exposure controls

8.2.1. Appropriate engineering controls:

Provide a good standard of general ventilation. Use powered wall- or window-mounted fans to supply fresh air - five to ten air changes per hour, with a through draught.

8.2.2. Individual protection measures, such as personal protective equipment

Eye protection:

Wear eye protection, if there is a risk of material splashing under work.

Protection for skin:

Use chemical protective clothes if there is a risk of splashing the material under work.

Protection for hands:

Use chemical protective gloves where there is a risk of skin contact under working, e.g. single-use NBR (nitrile rubber) gloves 0.2 mm thick are acceptable. Do not exceed the breakthrough time or reuse.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

8.2.3. Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour: Green Liquid

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| | |
|---|-------------------|
| Odour: | Slightly |
| Odour threshold: | No data available |
| pH: | Not Relevant |
| 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: | 71 °C |
| Evaporation rate: | No data available |
| Vapour pressure: | No data available |
| Relative density: | No data available |
| Solubility in water: | Slightly soluble |
| 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 |
| 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:
 - f) carcinogenicity:
 - Does not contain carcinogens (Ref. 1)
 - g) reproductive toxicity:
 - Does not contain reproductive toxicity and developmental toxic substances (Ref. 2)
 - Toxicological information of the main substances found in the mixture:
 - Bis(2-ethoxyethyl) ether - CAS: 112-36-7
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat = 4970 mg/kg
 - c) serious eye damage/irritation:
 - Test: Eye Irritant - Species: Rabbit Non-irritant
 - Bis(2-(2-methoxyethoxy)ethyl) ether - CAS: 143-24-8

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- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 3850 mg/kg
- b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Non-irritant
- c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Non-irritant
- e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli
Negative
- g) reproductive toxicity:
Test: Reproductive Toxicity - Route: Oral - Species: Rat reprotoxic category 3

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.

Bis(2-ethoxyethyl) ether - CAS: 112-36-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 10000 mg/l - Duration h: 96

Endpoint: LC50 - Species: Daphnia = 6600 mg/l - Duration h: 96

Bis(2-(2-methoxyethoxy)ethyl) ether - CAS: 143-24-8

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 7467 mg/l - Duration h: 48

Endpoint: ErC50 - Species: Algae = 8996 mg/l - Duration h: 72

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

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- 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:
 - Restriction 3
 - 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:
- H315 Causes skin irritation.
 - H360 May damage fertility or the unborn child.

| Hazard class and hazard category | Code | Description |
|----------------------------------|--------|------------------------------------|
| Skin Irrit. 2 | 3.2/2 | Skin irritation, Category 2 |
| Repr. 1B | 3.7/1B | Reproductive toxicity, Category 1B |

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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

- Ref. 1 ·IARC Monographs on the Evaluation Carcinogenic Risks to Humans (IARC:
International Agency for Research on Cancer)
·Journal of Occupational Health (JOH) (Japan Society of Occupational Health (JSOH))
·TLVs and BEIs (ACGIH: American Conference of Governmental Industrial Hygienists)
·IRIS Carcinogenic Assessment (IRIS: Integrated Risk Information System of US EPA)
·National Toxicology Program (NTP) Report on Carcinogens
·Annex VI of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL of 16 December 2008 on classification, labelling and
packaging of substances and mixtures, amending and repealing Directives 67/548/EEC
and 1999/45/EC, and amending Regulation (EC) No 1907/2006
·MAK und BAT Werte Liste (DFG: German Research Foundation)
·TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder
reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)
- Ref. 2 ·Annex VI of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL of 16 December 2008 on classification, labelling and
packaging of substances and mixtures, amending and repealing Directives 67/548/EEC
and 1999/45/EC, and amending Regulation (EC) No 1907/2006
·TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder
reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)

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. |

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|---------|---|
| 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. |