

1. Identification

GHS Product identifier
Mixture identification:
Trade name: Ink, T0290_C

Recommended use of the chemical and restrictions on use
Recommended use:
Ink for inkjet printing

Supplier's details
Supplier in Australia:
EPSON Australia Pty Limited
3 Talavera Road, North Ryde, NSW 2113, Australia
(02) 8899 3666 www.epson.com.au

Supplier in New Zealand:
EPSON New Zealand Pty Limited
7-9 Fanshawe Street, Auckland 1010, New Zealand
(09) 366 6855 www.epson.co.nz

Date: 26/11/2019
Revision: 1.0

Emergency phone number
Australia (02) 8899 3666 (Mon-Fri, 9AM-5PM, AEST)
New Zealand (09) 366 6855 (Mon-Fri, 9AM-5PM, NZST)

2. Hazard identification

Classification of the Hazardous chemical
The product is not classified as dangerous according to GHS - Fifth revised edition.

GHS label elements, including precautionary statements
The product is not classified as dangerous according to GHS - Fifth revised edition.

Hazard pictograms:
None

Hazard statements:
None

Precautionary statements:
None

Special Provisions:
None

Other hazards which do not result in a classification
No other hazards

3. Composition/information on ingredients

Substances
No

Mixtures
Hazardous components within the meaning of GHS and related classification:

Qty	Name	Ident. Number	Classification
50% ~ 65%	Water	CAS: 7732-18-5 EC: 231-791-2	The product is not classified as dangerous according to GHS - Fifth revised edition.
7% ~ 10%	Glycerol	CAS: 56-81-5 EC: 200-289-5	The product is not classified as dangerous according to GHS - Fifth revised edition.
7% ~ 10%	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	Index number: 603-183-00-0 CAS: 143-22-6 EC: 205-592-6	 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: 20% ≤ C < 30%: Eye Irrit. 2A

Safety Data Sheet

		REACH No.: 01-21194751 07-38	H319 C >= 30%: Eye Dam. 1 H318
0.25% ~ 0.5%	Triethanol amine	CAS: 102-71-6 EC: 203-049-8	The product is not classified as dangerous according to GHS - Fifth revised edition.

4. First-aid measures

Description of necessary 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.

Symptoms caused by exposure

None

Medical attention and special treatment

Treatment:

None

5. Fire-fighting measures

Suitable extinguishing media

Water.

Carbon dioxide (CO₂).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties: No data available

Oxidizing properties: No data available

Special protective equipment and precautions for fire-fighters

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

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

Methods and material for containment and cleaning up

Wash with plenty of water.

7. Handling and storage

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.

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.

8. Exposure controls/personal protection

Control parameters – exposure standards, biological monitoring

Glycerol - CAS: 56-81-5

- OEL Type: OSHA - TWA: 5 mg/m³ - Notes: Respirable dust

- OEL Type: OSHA - TWA: 15 mg/m³ - Notes: Total dust

Triethanol amine - CAS: 102-71-6

- OEL Type: ACGIH - TWA(8h): 5 mg/m³

DNEL Exposure Limit Values

No data available

PNEC Exposure Limit Values

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6

Target: Fresh Water - Value: 1.5 mg/l

Target: Freshwater sediments - Value: 5.77 mg/kg

Target: Marine water - Value: 0.15 mg/l

Target: Marine water sediments - Value: 0.13 mg/kg

Target: Microorganisms in sewage treatments - Value: 200 mg/l

Appropriate engineering controls

None

Individual protection measures, such as personal protective equipment (PPE)

Eye protection:

Use personal protective equipment as required.

Protection for skin:

Use personal protective equipment as required.

Protection for hands:

Use personal protective equipment as required.

Respiratory protection:

Use personal protective equipment as required.

Thermal Hazards:

None

Chemical Controls for Australian Printers

- Minimise skin contact with inks and cleaning chemicals.
- Ensure that ventilation equipment is maintained and working effectively, to minimise airborne exposures.

9. Physical and chemical properties

Appearance and colour:

Cyan Liquid

Odour:

Slightly

Odour threshold:

No data available

pH:

8.5 ~ 9.8 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

Safety Data Sheet

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:	1.071 at 20 °C
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
Miscibility:	No data available
Fat Solubility:	No data available
Conductivity:	No data available
Substance Groups relevant properties	No data available

10. Stability and reactivity

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None
Conditions to avoid	Stable under normal conditions.
Incompatible materials	None in particular.
Hazardous decomposition products	None.

11. Toxicological information

Toxicological information of the product:	
a) acute toxicity:	Test: LD50 - Route: Oral - Species: Rat > 2500 mg/kg Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg
b) skin corrosion/irritation:	Test: Skin Irritant - Species: Rabbit Mild irritant
c) serious eye damage/irritation:	Test: Eye Irritant - Species: Rabbit Minimal irritant
d) respiratory or skin sensitisation:	Test: Skin Sensitisation - Route: Maximisation Assay - Species: Guinea pig Non-sensitiser
e) germ cell mutagenicity:	Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative
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 product:	
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

Safety Data Sheet

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.

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6

a) acute toxicity:

Test: LD50 - Route: Dermal - Species: Rabbit = 3.54 ml/kg - Source: American Industrial Hygiene Association Journal. Vol. 23, Pg. 95, 1962.

Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg - Source: Office of Toxic Substances Report. Vol. OTS,

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.

If not differently specified, the information listed below must be considered as N.A.::

- 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.

12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Ink

Not classified for environmental hazards

Based on available data, the classification criteria are not met

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

None

13. Disposal considerations

Disposal methods

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

14. Transport information

UN number

Not classified as dangerous in the meaning of transport regulations.

UN proper shipping name

No data available

Transport hazard class(es)
No data available
Packing group, if applicable
No data available
Environmental hazards
No
Special precautions for user
No data available
Additional Information
No data available

15. Regulatory information

Safety, health and environmental regulations specific for the product in question
This Safety Data Sheet has been prepared according to the Australian Work Health and Safety (WHS) act and the Code of Practice on preparation of safety data sheets for Hazardous Chemicals
Australia Information:
Statement of Hazardous Nature:
Not classified as hazardous according to criteria of NOHSC
New Zealand Information:
Hazardous Substances and New Organisms Act 1996:
Not regulated

16. Other information

Full text of phrases referred to in Section 3:
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
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
Insert further consulted bibliography
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 (USA)
·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.

Safety Data Sheet

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.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.
SUSMP:	SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons

1. Identification

GHS Product identifier
Mixture identification:
Trade name: Ink, T0290_M

Recommended use of the chemical and restrictions on use
Recommended use: Ink for inkjet printing

Supplier's details
Supplier in Australia:
EPSON Australia Pty Limited
3 Talavera Road, North Ryde, NSW 2113, Australia
(02) 8899 3666 www.epson.com.au

Supplier in New Zealand:
EPSON New Zealand Pty Limited
7-9 Fanshawe Street, Auckland 1010, New Zealand
(09) 366 6855 www.epson.co.nz

Date: 26/11/2019
Revision: 2.0

Emergency phone number
Australia (02) 8899 3666 (Mon-Fri, 9AM-5PM, AEST)
New Zealand (09) 366 6855 (Mon-Fri, 9AM-5PM, NZST)

2. Hazard identification

Classification of the Hazardous chemical
The product is not classified as dangerous according to GHS - Fifth revised edition.

GHS label elements, including precautionary statements
The product is not classified as dangerous according to GHS - Fifth revised edition.

Hazard pictograms:
None

Hazard statements:
None

Precautionary statements:
None

Special Provisions:
None

Other hazards which do not result in a classification
No other hazards

3. Composition/information on ingredients

Substances
No

Mixtures
Hazardous components within the meaning of GHS and related classification:

Qty	Name	Ident. Number	Classification
50% ~ 65%	Water	CAS: 7732-18-5 EC: 231-791-2	The product is not classified as dangerous according to GHS - Fifth revised edition.
7% ~ 10%	Glycerol	CAS: 56-81-5 EC: 200-289-5	The product is not classified as dangerous according to GHS - Fifth revised edition.
7% ~ 10%	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	Index number: 603-183-00-0 CAS: 143-22-6 EC: 205-592-6	 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: 20% <= C < 30%: Eye Irrit. 2A

Safety Data Sheet

		REACH No.: 01-21194751 07-38	H319 C >= 30%: Eye Dam. 1 H318
7% ~ 10%	2,2' -oxybisethanol; diethylene glycol	Index number: 603-140-00-6 CAS: 111-46-6 EC: 203-872-2	 3.1/4/Oral Acute Tox. 4 H302
1% ~ 3%	tetra-ammonium 2-[6-[7-(2-carboxylato- phenylazo)-8-hydroxy- 3,6-disulfonato-1-napht hylamino]-4-hydroxy-1, 3,5-triazin-2-ylamino]b enzoate	Index number: 611-130-00-8 CAS: 183130-96-3 EC: 418-520-5	 3.3/2A Eye Irrit. 2A H319 4.1/C3 Aquatic Chronic 3 H412
0.5% ~ 1%	Triethanol amine	CAS: 102-71-6 EC: 203-049-8	The product is not classified as dangerous according to GHS - Fifth revised edition.

4. First-aid measures

Description of necessary 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.

Symptoms caused by exposure

None

Medical attention and special treatment

Treatment:

None

5. Fire-fighting measures

Suitable extinguishing media

Water.

Carbon dioxide (CO2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties: No data available

Oxidizing properties: No data available

Special protective equipment and precautions for fire-fighters

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

- Remove persons to safety.
- See protective measures under point 7 and 8.
- 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
- Methods and material for containment and cleaning up
 - Wash with plenty of water.

7. Handling and storage

- 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.
- 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.

8. Exposure controls/personal protection

- Control parameters – exposure standards, biological monitoring
 - Glycerol - CAS: 56-81-5
 - OEL Type: OSHA - TWA: 5 mg/m³ - Notes: Respirable dust
 - OEL Type: OSHA - TWA: 15 mg/m³ - Notes: Total dust
 - Triethanol amine - CAS: 102-71-6
 - OEL Type: ACGIH - TWA(8h): 5 mg/m³
- DNEL Exposure Limit Values
 - No data available
- PNEC Exposure Limit Values
 - 2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6
 - Target: Fresh Water - Value: 1.5 mg/l
 - Target: Freshwater sediments - Value: 5.77 mg/kg
 - Target: Marine water - Value: 0.15 mg/l
 - Target: Marine water sediments - Value: 0.13 mg/kg
 - Target: Microorganisms in sewage treatments - Value: 200 mg/l
- Appropriate engineering controls
 - None
- Individual protection measures, such as personal protective equipment (PPE)
- Eye protection:
 - Use personal protective equipment as required.
- Protection for skin:
 - Use personal protective equipment as required.
- Protection for hands:
 - Use personal protective equipment as required.
- Respiratory protection:
 - Use personal protective equipment as required.
- Thermal Hazards:
 - None
- Chemical Controls for Australian Printers
 - Minimise skin contact with inks and cleaning chemicals.
 - Ensure that ventilation equipment is maintained and working effectively, to minimise airborne exposures.

9. Physical and chemical properties

Appearance and colour:	Magenta Liquid
Odour:	Slightly
Odour threshold:	No data available
pH:	8.6 ~ 9.6 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 110 °C / 230 ° F (closed cup method, ASTM D 3278)
Evaporation rate:	No data available
Vapour pressure:	No data available
Relative density:	1.080 at 20 °C
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
Miscibility:	No data available
Fat Solubility:	No data available
Conductivity:	No data available
Substance Groups relevant properties	No data available

10. Stability and reactivity

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None
Conditions to avoid	Stable under normal conditions.
Incompatible materials	None in particular.
Hazardous decomposition products	None.

11. Toxicological information

Toxicological information of the product: a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg b) skin corrosion/irritation: Test: Skin Irritant - Species: Rabbit Non-irritant c) serious eye damage/irritation: Test: Eye Irritant - Species: Rabbit Mild irritant d) respiratory or skin sensitisation: Test: Skin Sensitisation - Route: Maximisation Assay - Species: Guinea pig Non-sensitiser e) germ cell mutagenicity: Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative
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- 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 product:
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.
- 2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6
- a) acute toxicity:
Test: LD50 - Route: Dermal - Species: Rabbit = 3.54 ml/kg - Source: American Industrial Hygiene Association Journal. Vol. 23, Pg. 95, 1962.
Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg - Source: Office of Toxic Substances Report. Vol. OTS,
- 2,2'-oxybisethanol; diethylene glycol - CAS: 111-46-6
- b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Mild irritant
- e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative
- 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.

If not differently specified, the information listed below must be considered as N.A.::

- 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.

12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Ink

Not classified for environmental hazards

Based on available data, the classification criteria are not met

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects
None

13. Disposal considerations

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

14. Transport information

UN number
Not classified as dangerous in the meaning of transport regulations.
UN proper shipping name
No data available
Transport hazard class(es)
No data available
Packing group, if applicable
No data available
Environmental hazards
No
Special precautions for user
No data available
Additional Information
No data available

15. Regulatory information

Safety, health and environmental regulations specific for the product in question
This Safety Data Sheet has been prepared according to the Australian Work Health and Safety (WHS) act and the Code of Practice on preparation of safety data sheets for Hazardous Chemicals
Australia Information:
Statement of Hazardous Nature:
Not classified as hazardous according to criteria of NOHSC
New Zealand Information:
Hazardous Substances and New Organisms Act 1996:
Not regulated

16. Other information

Full text of phrases referred to in Section 3:
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
Paragraphs modified from the previous revision:
1. Identification
3. Composition/information on ingredients
8. Exposure controls/personal protection
9. Physical and chemical properties
11. Toxicological information
12. Ecological information
15. Regulatory information
16. Other information

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

Insert further consulted bibliography

- 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 (USA)
·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.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average

Safety Data Sheet

WGK:	German Water Hazard Class.
SUSMP:	SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons

1. Identification

GHS Product identifier
Mixture identification:
Trade name: Ink, T0290_Y

Recommended use of the chemical and restrictions on use
Recommended use: Ink for inkjet printing

Supplier's details
Supplier in Australia:
EPSON Australia Pty Limited
3 Talavera Road, North Ryde, NSW 2113, Australia
(02) 8899 3666 www.epson.com.au

Supplier in New Zealand:
EPSON New Zealand Pty Limited
7-9 Fanshawe Street, Auckland 1010, New Zealand
(09) 366 6855 www.epson.co.nz

Date: 26/11/2019
Revision: 1.0

Emergency phone number
Australia (02) 8899 3666 (Mon-Fri, 9AM-5PM, AEST)
New Zealand (09) 366 6855 (Mon-Fri, 9AM-5PM, NZST)

2. Hazard identification

Classification of the Hazardous chemical
The product is not classified as dangerous according to GHS - Fifth revised edition.

GHS label elements, including precautionary statements
The product is not classified as dangerous according to GHS - Fifth revised edition.

Hazard pictograms:
None

Hazard statements:
None

Precautionary statements:
None

Special Provisions:
None

Other hazards which do not result in a classification
No other hazards

3. Composition/information on ingredients

Substances
No

Mixtures
Hazardous components within the meaning of GHS and related classification:

Qty	Name	Ident. Number	Classification
65% ~ 80%	Water	CAS: 7732-18-5 EC: 231-791-2	The product is not classified as dangerous according to GHS - Fifth revised edition.
10% ~ 12.5%	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	Index number: 603-183-00-0 CAS: 143-22-6 EC: 205-592-6 REACH No.: 01-21194751 07-38	 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: 20% <= C < 30%: Eye Irrit. 2A H319 C >= 30%: Eye Dam. 1 H318
10% ~	Glycerol	CAS: 56-81-5	The product is not classified as

Safety Data Sheet

12.5%		EC: 200-289-5	dangerous according to GHS - Fifth revised edition.
7% ~ 10%	2,2' -oxybisethanol; diethylene glycol	Index number: 603-140-00-6 CAS: 111-46-6 EC: 203-872-2	 3.1/4/Oral Acute Tox. 4 H302
1% ~ 3%	Direct Yellow 173	Index number: 611-141-00-8 EC: 414-410-6 REACH No.: 01-00000161 46-74	 3.3/1 Eye Dam. 1 H318  3.4.2/1 Skin Sens. 1 H317
0.5% ~ 1%	2,4,7,9-tetramethyldec-5-yne-4,7-diol	CAS: 126-86-3 EC: 204-809-1 REACH No.: 01-21199543 90-39	 3.3/1 Eye Dam. 1 H318  3.4.2/1B Skin Sens. 1B H317 4.1/C3 Aquatic Chronic 3 H412

4. First-aid measures

Description of necessary 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.

Symptoms caused by exposure

None

Medical attention and special treatment

Treatment:

None

5. Fire-fighting measures

Suitable extinguishing media

Water.

Carbon dioxide (CO2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties: No data available

Oxidizing properties: No data available

Special protective equipment and precautions for fire-fighters

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.
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
Methods and material for containment and cleaning up
Wash with plenty of water.

7. Handling and storage

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.
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.

8. Exposure controls/personal protection

Control parameters – exposure standards, biological monitoring
Glycerol - CAS: 56-81-5
- OEL Type: OSHA - TWA: 5 mg/m³ - Notes: Respirable dust
- OEL Type: OSHA - TWA: 15 mg/m³ - Notes: Total dust
DNEL Exposure Limit Values
No data available
PNEC Exposure Limit Values
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6
Target: Fresh Water - Value: 1.5 mg/l
Target: Freshwater sediments - Value: 5.77 mg/kg
Target: Marine water - Value: 0.15 mg/l
Target: Marine water sediments - Value: 0.13 mg/kg
Target: Microorganisms in sewage treatments - Value: 200 mg/l
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
Appropriate engineering controls
None
Individual protection measures, such as personal protective equipment (PPE)
Eye protection:
Use personal protective equipment as required.
Protection for skin:
Use personal protective equipment as required.
Protection for hands:
Use personal protective equipment as required.
Respiratory protection:
Use personal protective equipment as required.
Thermal Hazards:
None
Chemical Controls for Australian Printers
• Minimise skin contact with inks and cleaning chemicals.

- Ensure that ventilation equipment is maintained and working effectively, to minimise airborne exposures.

9. Physical and chemical properties

Appearance and colour:	Yellow Liquid
Odour:	Slightly
Odour threshold:	No data available
pH:	8.5 ~ 9.5 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:	1.064 at 20 °C
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
Miscibility:	No data available
Fat Solubility:	No data available
Conductivity:	No data available
Substance Groups relevant properties	No data available

10. Stability and reactivity

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None
Conditions to avoid	Stable under normal conditions.
Incompatible materials	None in particular.
Hazardous decomposition products	None.

11. Toxicological information

Toxicological information of the product:	
a) acute toxicity:	Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg
b) skin corrosion/irritation:	Test: Skin Irritant - Species: Rabbit Non-irritant
c) serious eye damage/irritation:	Test: Eye Irritant - Species: Rabbit Minimal irritant
d) respiratory or skin sensitisation:	Test: Skin Sensitisation - Route: Maximisation Assay - Species: Guinea pig Non-sensitiser

- e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium Negative
 - 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 product:
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6
- a) acute toxicity:
Test: LD50 - Route: Dermal - Species: Rabbit = 3.54 ml/kg - Source: American Industrial Hygiene Association Journal. Vol. 23, Pg. 95, 1962.
Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg - Source: Office of Toxic Substances Report. Vol. OTS,
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., 1969 Vol. -, Pg. 288, 1969.
- 2,2'-oxybisethanol; diethylene glycol - CAS: 111-46-6
- b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Mild irritant
 - e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative
Direct Yellow 173 - Index number: 611-141-00-8
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: Acute Oral Toxicity Study with H113664 in Rats.
Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg - Source: Acute Dermal Toxicity Study with H113664 in Rats
 - b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Slight - Duration: 4h - Source: Primary Skin Irritation Study with H113664 in Rabbits
 - c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Severe irritant - Source: Primary Eye Irritation Study with H113664 in Rabbits
 - d) respiratory or skin sensitisation:
Test: Skin Sensitisation - Species: Guinea pig Sensitiser - Source: Contact Hypersensitivity to H113664 in Albino Guinea Pigs, Maximisation Test
 - e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative - Source: Salmonella typhimurium and Escherichia coli Reverse Mutation Assay for Azo dyes with H113664
- 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
 - b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Mild irritant
 - c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Highly irritating
 - d) respiratory or skin sensitisation:
Test: Skin Sensitisation - Route: LLNA - Species: Mouse Sensitiser
 - e) germ cell mutagenicity:
Test: Mutagenesis - Species: Salmonella Typhimurium Negative
Direct Yellow 173 - Index number: 611-141-00-8

LD50 > 2000mg/kg Rat(Oral)
No-irritant to Rabbits skin

If not differently specified, the information listed below must be considered as N.A.::

- 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.

12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Ink

Not classified for environmental hazards

Based on available data, the classification criteria are not met

Direct Yellow 173 - Index number: 611-141-00-8

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 120 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia > 20 mg/l - Duration h: 48

Endpoint: ErC50 - Species: Algae > 100 mg/l

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 = 630 mg/l - Duration h: 0.5 - Notes: OECD TG No.209

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

None

13. Disposal considerations

Disposal methods

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

14. Transport information

UN number

Not classified as dangerous in the meaning of transport regulations.

UN proper shipping name

No data available

Transport hazard class(es)

No data available

Packing group, if applicable
No data available
Environmental hazards
No
Special precautions for user
No data available
Additional Information
No data available

15. Regulatory information

Safety, health and environmental regulations specific for the product in question
This Safety Data Sheet has been prepared according to the Australian Work Health and Safety (WHS) act and the Code of Practice on preparation of safety data sheets for Hazardous Chemicals
Australia Information:
Statement of Hazardous Nature:
Not classified as hazardous according to criteria of NOHSC
New Zealand Information:
Hazardous Substances and New Organisms Act 1996:
Not regulated

16. Other information

Full text of phrases referred to in Section 3:

H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

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

Insert further consulted bibliography

- 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 (USA)
·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
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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.

Safety Data Sheet

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.

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CAS:	Chemical Abstracts Service (division of the American Chemical Society).
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