

Safety Data Sheet

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: Ink Cartridge, T6241

Recommended use of the chemical and restrictions on use

Recommended use:

Ink for inkjet printing

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

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

Emergency phone number

Australia (02) 8899 3666 (Mon-Fri, 9AM-5PM, AEST)

New Zealand (09) 366 6855 (Mon-Fri, 9AM-5PM, NZST)

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

Warning, Flam. Liq. 4, Combustible liquid.

⚠ Warning, Eye Irrit. 2A, Causes serious eye irritation.

⚠ Warning, Skin Irrit. 2, Causes skin irritation.

⚠ Danger, Repr. 1B, May damage fertility or the unborn child.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H227 Combustible liquid.

H319 Causes serious eye irritation.

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.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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 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.

Safety Data Sheet

P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use a dry powder fire extinguisher to extinguish.
P403 Store in a well-ventilated place.
P405 Store locked up.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

No

Mixtures

Hazardous components within the meaning of GHS regulation and related classifications:

50% ~ 65% Bis(2-ethoxyethyl) ether

REACH No.: 01-2119969946-13, CAS: 112-36-7, EC: 203-963-7

2.6/4 Flam. Liq. 4 H227

 3.2/2 Skin Irrit. 2 H315

12.5% ~ 15% gamma-Butyrolactone

CAS: 96-48-0, EC: 202-509-5

The product is not classified as dangerous according to GHS - Fifth revised edition.

10% ~ 12.5% Bis(2-(2-methoxyethoxy)ethyl) ether

REACH No.: 01-2119958965-16, CAS: 143-24-8, EC: 205-594-7

2.6/4 Flam. Liq. 4 H227

 3.7/1B Repr. 1B H360

3% ~ 5% Carbon black

CAS: 1333-86-4, EC: 215-609-9

The product is not classified as dangerous according to GHS - Fifth revised edition.

3% ~ 5% Tetraethylene glycol monobutyl ether

CAS: 1559-34-8, EC: 216-322-1

The product is not classified as dangerous according to GHS - Fifth revised edition.

4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

Immediately take off all contaminated clothing.

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:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

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

Safety Data Sheet

In case of Inhalation:

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

Most important symptoms/effects, acute and delayed

None

Indication of immediate medical attention and special treatment needed

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

Treatment:

None

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

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

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.

Methods and materials 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.

Exercise the greatest care when handling or opening the container.

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.

Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Safety Data Sheet

Storage temperature:
Store at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Carbon black - CAS: 1333-86-4

- OEL Type: OSHA - TWA: 3.5 mg/m³

- OEL Type: ACGIH - TWA(8h): 3 mg/m³

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

Appropriate engineering controls:

None

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not required unless engineering controls are inadequate to control inhalation exposure (refer to the following for ventilation recommendations).

Chemical Controls for Australian Printers

P39 Wide-format inkjet printing with solvent-borne inks:

Follow Safe Work Australia control guidance sheet, P39 Wide-format inkjet printing with solvent-borne inks. Linked at following website:

<http://www.safeworkaustralia.gov.au/sites/swa/whs-information/hazardous-chemicals/printers/controlguidance/digital/pages/p39wideformatinkjetprintingwithsolventborneinks>

Thermal Hazards:

None

Safety Data Sheet

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:	Black Liquid
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
Flash point:	71 °C / 160 °F (Cleveland open cup method, JIS K2265-4)
Evaporation rate:	No data available
Vapour pressure:	No data available
Relative density:	0.9 ~ 1.1
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
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

Information on toxicological effects	
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 Moderate irritant
d) respiratory or skin sensitisation:	Test: Skin Sensitisation - Route: LLNA Negative
e) germ cell mutagenicity:	

Safety Data Sheet

Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative
Toxicological information of the main substances found in the product:

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

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

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

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.

Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

gamma-Butyrolactone - Group 3

Carbon black - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Safety Data Sheet

Mobility in soil
No data available
Other adverse effects
None

13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. 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
No data available
Environmental hazards
No data available
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
No data available
Special precautions
No data available

15. REGULATORY INFORMATION

USA - Federal regulations
TSCA - Toxic Substances Control Act
TSCA inventory: all the components are listed on the TSCA inventory.
TSCA listed substances:
Diethylene glycol diethyl ether; Ethyldiglyme is listed in TSCA §5(a) - Final SNUR, §12(b) - Export Notice.
SARA - Superfund Amendments and Reauthorization Act
Section 302 – Extremely Hazardous Substances: no substances listed.
Section 304 – Hazardous substances: no substances listed.
Section 313 – Toxic chemical list: Bis(2-ethoxyethyl) ether.
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
Substance(s) listed under CERCLA: Bis(2-ethoxyethyl) ether.
CAA - Clean Air Act
CAA listed substances:
Bis(2-ethoxyethyl) ether is listed in CAA Section 111, Section 112.
CWA - Clean Water Act
CWA listed substances:
None.
Australia Information:
Statement of Hazardous Nature:
Classified as Toxic and Irritant 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:
H227 Combustible liquid.

Safety Data Sheet

H315 Causes skin irritation.

H360 May damage fertility or the unborn child.

Safety Data Sheet dated October 6, 2017, Revision: 1.0

Disclaimer:

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. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

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.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
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.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
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).