

Safety Data Sheets

1. Identification

Product Name : ES3 ink White
Order No. : SPC-0433W-2
General Use : Ink for ink jet printer
Product Description : Solvent pigment ink
SDS Number : 037-S042339
Manufacture
Company Name : Mimaki Engineering Co., Ltd.
Address : 2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 JAPAN
Telephone No. : +81-268-64-2413
Importer / Distributor Established in Australia
Company Name : MIMAKI AUSTRALIA PTY LTD.
Address : Unit 14, 38-46 South Street, Rydalmere, NSW 2116, Australia
Telephone No. : + 61-2-8036-4500
Emergency Telephone No. : +61 2 8014 4558 (within Australia only)
18000 74234 (within Australia only)
+65 3158 1074

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Category 4

Health Hazards

Skin Corrosion / Irritation : Category 2

Eye Damage / Irritation : Category 2

The above list does not include category being non-classifiable or not-applicable.

[GHS Label Elements]

Symbol



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Signal Word

Warning

Hazard Statements

H227 Combustible liquid

H315 Causes skin irritation

H319 Causes serious eye irritation

Precautionary Statements

[Prevention]

P210 Keep away from open flames and other ignition sources.-No smoking.

P264 Wash hands and eyes thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

[Response]

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing.

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 alcohol-resistant-related fire foam, dry chemical, carbon dioxide, water spray, dry sand for extinguish.

[Storage]

P403+P235 Store in a well-ventilated place. Keep cool.

[Disposal]

P501 Dispose of contents/container in accordance with local/regional/national/ international regulation (to be specified).

HMIS Rating (scale 0 – 4)

Health = 1

Flammability= 2

Reactivity = 1

Protective Equipment = C

①	Health
②	Flammability
①	Reactivity
Ⓑ	Protective Equipment

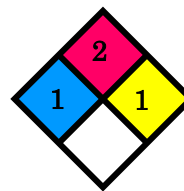
NFPA Rating (scale 0 – 4)

Health = 1

Flammability = 2

Instability = 1

Special = 0



CANADIAN WHMIS SYMBOLS : Not applicable

3. Composition / Information on Ingredients

Mixtures

Chemical Name	Wt%	CAS No.	Chemical Formula
Bis(2-ethoxyethyl)ether	50-65	112-36-7	C ₈ H ₁₈ O ₃

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1-ethoxy-2-(2-methoxyethoxy)ethane	15-25	1002-67-1	C ₇ H ₁₆ O ₃
Titanium dioxide	10-20	13463-67-7	TiO ₂

4. First Aid Measures

Skin Contact	<p>: Immediately take off all contaminated clothing.</p> <p>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.</p> <p>Wash thoroughly the body (shower or bath).</p> <p>Remove contaminated clothing immediately and dispose off safely.</p> <p>After contact with skin, wash immediately with soap and plenty of water.</p>
Eye Contact	: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion	: Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.
Inhalation	: Remove casualty to fresh air and keep warm and at rest.
Most important symptoms and effects, both acute and delayed	: none
Indication of any immediate medical attention and special treatment needed	<p>: In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).</p> <p>Treatment: None</p>

5. Fire Fighting Measures

Flammable Properties	: Flash point : 73.7°C / 165° F
Extinguishing Media	: Water. Carbon dioxide (CO ₂).
Unsuitable Extinguishing Media	: None in particular.
Special hazards arising from the substance or mixture	<p>: Do not inhale explosion and combustion gases.</p> <p>Burning produces heavy smoke.</p>
Advice for firefighters	: Use suitable breathing apparatus .

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

7. Handling and Storage

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.
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.

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Specific end use(s) : None in particular

8. Exposure Controls / Personal Protection

Control parameters : **Titanium dioxide - CAS: 13463-67-7**

TLV TWA - 10 mg/m³

DNEL Exposure Limit : **Bis(2-ethoxyethyl) ether - CAS: 112-36-7**

Values

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

PNEC Exposure Limit : **Bis(2-ethoxyethyl) ether - CAS: 112-36-7**

Values

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

Legend:

DNEL: Derived No Effect Level, PNEC: Predicted No Effect Concentration

Exposure Controls

Occupational Exposure Controls

Engineering Controls : Use exhaust ventilation to avoid from exposure.

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

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 needed for normal use.

Thermal Hazards : none

Environmental : none

exposure controls

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9. Physical and Chemical Properties

[Information on basic physical and chemical properties]

Appearance	- Physical State	: liquid
	- Color	: White
Odor		: 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		: 73.7 °C / 165 ° 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		: 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 (at 25 °C)
Explosive properties		: No data available
Oxidizing properties		: No data available
[Other information]		
Miscibility		: No data available
Fat Solubility		: No data available
Conductivity		: No data available

10. Stability and Reactivity

Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous	: none

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reactions

Conditions to avoid : Stable under normal conditions.

Incompatible materials : None in particular.

Hazardous : none

decomposition products

11. Toxicological Information

[Information on toxicological effects]

Toxicological information of the mixture : No data available

Toxicological information of the main substances found in the mixture

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

acute toxicity : Test: LD50 - Route: Oral - Species: Rat = 4970 mg/kg - Notes: OECD TG No.401

serious eye : Test: Eye Irritant - Species: Rabbit Non-irritant - Notes: OECD TG
 damage/irritation No.405

1-ethoxy-2-(2-methoxyethoxy)ethane - CAS: 1002-67-1

acute toxicity : Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
 Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg

skin : Test: Skin Irritant - Route: Dermal - Species: Rabbit Negative

corrosion/irritation

serious eye : Test: Eye Irritant - Species: Rabbit Negative

damage/irritation

germ cell : Test: Mutagenesis - Species: Salmonella Typhimurium Negative

mutagenicity

reproductive toxicity : Test: Reproductive Toxicity - Route: Oral - Species: Rat Negative

Titanium dioxide - CAS: 13463-67-7

: Titanium dioxide is classified as "possibly carcinogenic to human" (Group 2B). In animal chronic inhalation studies, the tumor formulation observed in only rats with animal chronic inhalation study are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, dose not result in inhalation of excessive dust. Epidemiological study to data have not revealed any evidence of the relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.

Substance(s) listed on the IARC Monographs

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: Titanium dioxide - Group 2B.

12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it. Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

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

Aquatic acute toxicity

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

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

: **1-ethoxy-2-(2-methoxyethoxy)ethane - CAS: 1002-67-1**

Aquatic acute toxicity

Endpoint: EC50 - Species: Algae > 89.5 mg/l - Duration h: 96

Endpoint: LC50 - Species: Daphnia > 93.6 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish > 90.8 mg/l - Duration h: 96

Persistence and : No data available

Degradability

Bioaccumulative : No data available

Potential

Mobility in soil : No data available

Results of PBT and : vPvB Substances: None - PBT Substances: None

vPvB assessment

Other Adverse Effects : none.

13. Disposal Considerations

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

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

UN number : Not classified as dangerous in the meaning of transport regulations.

UN proper shipping : No data available.

name

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Transport hazard class(es) : No data available.

Packing group : No data available.

Environmental hazards : No data available.

Special precautions for user : No data available.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code : No data available.

15. Regulatory Information

[EU Information]

: 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 : No data available

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directives

82/501/EC(Seveso),

96/82/EC(Seveso II)

[USA Information]

TSCA - Toxic Substances Control Act : TSCA inventory: all the components are listed on the TSCA inventory.

TSCA listed substances: Bis(2-ethoxyethyl) ether is listed in TSCA Section 5a - SNUR, Section 12b.

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.

CAA - Clean Air Act : CAA listed substances:

Bis(2-ethoxyethyl) ether is listed in CAA Section 111, Section 112.

1-ethoxy-2-(2-methoxyethoxy)ethane is listed in CAA Section 112(b) - HAP, Section 112(b) - HON.

California Proposition 65 : Substance(s) listed under California Proposition 65: Titanium dioxide - Listed as carcinogen.

[Canada Information]

WHMIS Controlled Product : Not applicable (Manufactured article)

[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

Chemical safety assessment : No.

16. Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Mimaki Engineering Corporation.



Product Name: ES3 ink White

SDS No. 037-S042339

First issue: 2017/05/17

Revised: 2024/06/27

Safety Data Sheets

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

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