

Safety Data Sheet

1. Identification of the substance/mixture and company/undertaking

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| 1.1 Product identifier | Product Name : Ink Cartridge(Gray)
Product Code : IP6-227/IP6-237 |
| 1.2 Relevant identified uses of the substance or mixture and uses advised against | Inkjet Ink |
| 1.3 Details of the supplier of the safety data sheet | |
| Manufacturer's Name : | Seiko I Infotech Inc.
563, Takatsuka-Shinden, Matsudo-shi, Chiba, 270-2222, Japan
Tel:+81-47-391-2349 |
| Distributor: | Seiko Instruments GmbH
Siemensstrase 9, D-63263 Neu-Isenburg
Germany
Tel: +49-6102-297-0 |

2. Hazards identification

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| 2.1 Classification of the substance or mixture | <Regulation (EC) No. 1272/2008> |
| Classification: | Eye Irrit 2, H319 |
| <1999/45/EC > | |
| Classification: | Irritant preparation |
| 2.2 Label elements | |
| <1999/45/EC > | |
| Symbols of danger : | Xi |
| R-phrase: | R36 Irritating to eyes. |
| Precautionary statements | |
| 2.3 Other hazards | |
| prevention | Wear eye protection/face protection.
Do not breathe mist/vapours/spray. |
| response | IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Get medical advice/attention if you feel unwell. |
| storage | Store in a well-ventilated place. Keep container tightly closed. |
| disposal | Dispose of contents/container to incineration in accordance with local/national regulation. |
| Supplemental information | None. |
| 2.3 Other hazards | The hazardous properties of this product have not been fully investigated, so handle and dispose of with caution. |

3. Composition/information on ingredients

Substance / Mixture: Mixture

Main Ingredients	Content(%)	CAS No.	EC No.	EU Reg.No.	Classification EC No. 1272/2008	Classification 67/548/EEC
bis(2-ethoxyethyl)ether	70-80	112-36-7	203-963-7	NA	Eye Irrit 2, H319	Xi , R36
γ-butyrolactone	<10	96-48-0	202-509-5	NA	Acute Tox 4, H302; Eye Irrit 2, H319	Xn, R22,R36
(2-methoxymethyl ethoxy)propanol	<10	34590-94-8	252-104-2	NA	None	None
Carbon black	<1	1333-86-4	215-609-9	NA	None	None

Other components (listed on EINECS, NLP or ELINCS) are not hazardous according to the directives mentioned above.

NA: not available

4. First aid measures

4.1 Description of first aid measures

Inhalation :	Move to fresh air area. Call a physician
Skin Contact :	In case of contact, immediately wash skin with soap and plenty of water. If irritation develops, get medical attention. Remove contaminated clothing and shoes.
Eye Contact :	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion :	If swallowed, seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

See Section 4.1.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:	Use water spray, carbon dioxide, dry chemical powder or foam.
Unsuitable Extinguishing Media	None.

5.2 Special hazards arising from the substance or mixture

Specific Hazards	Irritant, corrosive and/or toxic gas may be generated by a fire.
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5.3 Advice for firefighters

Specific Fire Fighting	Carry out fire-fighting at the safe and effective distance from the fire, or use a unattended hose-holding unit, or a nozzle with a monitor.
Protection of Fire Fighters	In fire-extinguishing activity, wear an appropriate air breathing apparatus and full protective clothing for

chemicals.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not touch the leakage, and do not walk on it. Prohibit unauthorized entry into the area. Wear appropriate personal protective equipment and avoid inhalation or contact with eyes and skin. If not wearing an appropriate personal protective clothing, do not touch the damaged leakage.

6.2 Environmental precautions

Do not release into the environment.
Pay attention not to cause the influence on the environment by discharging into rivers.

6.3 Methods and material for containment and cleaning up

Decontamination/Absorption/Sweeping/Vacuuming/Neutralization

In case of small quantity, absorb the leakage with dry soil, sand, and incombustible-material or collect it into a container that can be covered tightly for later disposal. In case of small quantity, use clean and anti-static tools to collect absorbed materials. In case of large quantity, prevent the spills from spreading with embankment to lead them to a safe place for collection. Collect the material into a disposal container by sucking up or sweeping up.

Methods and Equipment for Containment and Cleaning up

All devices to handle spills must be grounded.
If not dangerous, stop the leak. Small amount: Prevent the material from wetting by rain. Cover with dry soil, dry sand, or non-combustibles and store under a plastic sheet cover to avoid scattering and wetting. Cleansing the contaminated area thoroughly with water after removal.

Prevention Measures for Secondary Accidents.

Removes all ignition sources promptly. (Prohibition of smoking, sparks, and flames in the surrounding area)
Prevent flowing into drain, sewage, basement, and closed area.

6.4. Reference to other sections

See Section 8 and 13

7. Handling and storage

7.1 Precautions for safe handling

Technical Measures

See Section 8.2.

Local and General Ventilation

Provide local ventilations and a full ventilation system .

Precautions for Safe Handling

Prohibit the use of heat, sparks, and fire in the surrounding area.
Wash hands thoroughly after handling.
Avoid swallowing.
Avoid the contact with the skin.

Prevents Handling of Incompatible Substances or Mixtures

Not required in the normal handling."

7.2 Conditions for safe storage, including any incompatibilities

Store away from oxidants.
Have containers keep away from direct sunlight and heat.
Store in a well-ventilated and cool place keeping container tightly closed.

7.3 Specific end use(s)

Incompatible Substances or Mixtures

Refer to "10. Stability and reactivity"

Storage Conditions

Store the ink cartridges in a cool and dark place.

Keep out of reach of children.
Material Used in Packaging/Containers
Use containers prescribed in the "UN Transport Regulations."

8. Exposure controls/personal protection

8.1 Control parameters

EU limit values	(2-methoxymethylethoxy)propanol: IOELV: 8 h TWA, 308 mg/m ³ (50 ppm).
UK limit values	(2-methoxymethylethoxy)propanol: WEL: 8 h TWA, 308 mg/m ³ (50ppm). Carbon black: WEL: 8 h TWA, 3.5 mg/m ³ ; 15 min STEL, 7 mg/m ³ .

8.2 Exposure controls

Engineering Controls	Use Local exhaust ventilation.
Personal Protective Equipment	
Respiratory Protection	Respirator to avoid breathing organic solvent vapor.
Hand Protection	Wear chemical resistant gloves.
Eye Protection	Use safety glasses or goggles.
Skin and Body Protection	Wear working clothes.
Specific Hygiene Measures	Wash hands thoroughly after handling.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical State	Liquid
Color	Black
Odor	Solvent odor
Odour threshold	Not available
pH	Not available
Melting/freezing point	Not available
Initial boiling point/range	Not available
Flash point	71°C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Flamm. or expl. limits	1.4 – 6.9v/v% as γ -Butyrolactone 1.3 – 10.4v/v% as (2-Methoxymethylethoxy)propanol
Vapour pressure	Not available
Vapour density	Not available
Relative density	0.9 to 1.1
Solubilities	Soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temp.	Not available
Decomposition temp.	Not available
Viscosity	5 to 15 mPa.s (25 °C)
Explosive properties	Not available
Oxidising properties	Not available

9.2 Other information

No information available.

10. Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions	No information available.
10.4 Conditions to avoid	Extremely high temperature
10.5 Incompatible materials	Oxidising agents, strong bases and transition metals
10.6. Hazardous decomposition products	No information available

11. Toxicological information

11.1 Information on toxicological effects	
Acute toxicity	No data available.
Skin corrosion/irritation	No data available.
Serious eye damage/irritation	May cause eye irritation.
Respiratory or skinsensitisation	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	Carbon black is considered by the IARC as a possible carcinogen to human (Group 2B), but not when used in liquid form, so that printing ink is classified into Group 3 (not classifiable as to its carcinogenicity to humans).
Reproductive toxicity	No data available.
STOT-single exposure	No data available.
STOT-repeated exposure	No data available.
Aspiration hazard	No data available.

12. Ecological information

12.1 Toxicity	No information available.
12.2 Persistence and degradability	No information available.
12.3 Bioaccumulative potential	No information available.
12.4 Mobility in soil	No information available.
12.5 Results of PBT and vPvB assessment	
PBT	Not applicable.
vPvB	Not applicable.
12.6 Other adverse effects	
Environmental Hazards	No information available

13. Disposal considerations

13.1 Waste treatment methods	Comply with national and local environmental regulations. Do not dump this product into sewers, on the ground or into any body of water.
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14. Transport information

14.1 UN number	Not classified as dangerous goods according to UN criteria.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	Not applicable.

- 14.6 Special precautions for user Not classified as environmentally hazardous.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
Not applicable.
Follow all regulations in your country.
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15. Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
UK: Control of Substances Hazardous to Health Regulations 2002(COSHH).
Workplace Exposure Limits EH40/2005, with 2007 supplement, Health and Safety Executive.
- This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
- 15.2 Chemical safety assessment No information available.
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16. Other information

- Abbreviations PBT, persistent, bioaccumulative, and toxic; STEL, short-term exposure limit; STOT SE, specific target organ toxicity single exposure; TWA, time-weighted average; vPvB, very persistent, very bioaccumulative.
- References Annex VI of Regulation 1272/2008 on Harmonised Classification and Labelling for Certain Hazardous Substances.
Existing Chemical Substances Information System (ESIS) available at the European Chemical Bureau website:
<http://ecb.jrc.ec.europa.eu/esis/>
Information on Registered Substances; Chemical Substance Search; European Chemicals Agency (ECHA), available at the ECHA website:
<http://echa.europa.eu>.
- Basis of classification The mixture is self-classified on the basis of available information on the ingredients.
- List of R-phrases R22, harmful if swallowed.
R36, irritating to eyes.
- List of hazard statements H302: Harmful if swallowed.
H319: Causes serious eye irritation.

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