

SAFETY DATA SHEET

Ink cartridge(Yellow)

IP6-221

OKI DATA INFOTECH CORPORATION



Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier Product Name : Ink cartridge(Yellow)

Product Code: IP6-221

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: OKI Data Infotech Corporation

563, Takatsuka-Shinden, Matsudo-shi, Chiba, 270-2222, Japan

Tel:+81-47-391-2349

Distributor: OKI Data Americas, Inc.

2067 Wineridge Place, Suite C Escondido, CA 92029, USA

+1-760-781-5200

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification

Flammable liquids Category 4
Skin irritation Category 2
Serious eye damage Category 1

2.2 Label elements

Hazard pictograms



Signal word: Danger

Hazard statements H227 Combustible liquid. H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements

Response:

Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces. - No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 + P310 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.

P332 + P313 If skin irritation occurs: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before

reuse.

P370 + P378 In case of fire: Use water spray, alcohol-resistant

foam, dry chemical or carbon dioxide to extinguish.

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

Disposal: P501 Dispose of contents/ container to an approved waste

disposal plant.

2.3 Other hazards



Vapours may form explosive mixture with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Main Ingredients	Content(%)	CAS-No.	
bis(2-ethoxyethyl)ether	70-80	112-36-7	
γ-butyrolactone	<10	96-48-0	
(2-methoxymethylethoxy)propanol	<10	34590-94-8	
Nickel-based pigment	<10	Proprietary	
Synthetic resin	<10	Proprietary	
Additives	<10	Proprietary	

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: In the case of accident or if you feel unwell, seek medical

advice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled: If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact: In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact: In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention immediately.

If swallowed: If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur.

Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks: Causes skin irritation.

Causes serious eye damage.

Protection of first-aiders First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically and supportively

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing Water spray

media: Alcohol-resistant foam

Dry chemical

Carbon dioxide (CO2)

Unsuitable Extinguishing Media

High volume water jet



5.2 Special hazards arising from the substance or mixture

Specific hazards during

fire-fighting:

Do not use a solid water stream as it may scatter and spread

tire.

Flash back possible over considerable distance. Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products:

Carbon oxides

5.3 Advice for firefighters

Special protective equipment In the event of fire, wear self-contained breathing apparatus.

for fire-fighters:

Use personal protective equipment.

Specific extinguishing

methods:

Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Cool containers/tanks with water spray.

Remove undamaged containers from fire area if it is safe to

do so.

Evacuate area.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice and personal protective

equipment recommendations.

6.2 Environmental precautions

Environmental precautions: Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Non-sparking tools should be used.

Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Suppress (knock down) gases/vapours/mists with a water

spray jet.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in

appropriate container.

Clean up remaining materials from spill with suitable

absorbent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in the cleanup of releases. You will need to

determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling



Technical measures: See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: Use with local exhaust ventilation.

Use only in an area equipped with explosion proof exhaust

ventilation.

Advice on safe handling: Do not get on skin or clothing.

Avoid inhalation of vapour or mist.

Do not swallow. Do not get in eyes.

Handle in accordance with good industrial hygiene and

safety practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to

the environment.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat

and sources of ignition.

Advice on common storage: Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

Recommended storage

temperature

5 - 35 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymethyle-thoxy)propanol	34590-94-8	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		TWA	100 ppm 600 mg/m3	NIOSH REL
		ST	150 ppm 900 mg/m3	NIOSH REL
		TWA	100 ppm 600 mg/m3	OSHA Z-1

8.2 Exposure controls

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Use only in an area equipped with explosion proof exhaust

ventilation.

Personal protective equipment

Respiratory protection General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where

concentrations are above recommended limits or are

unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided



by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material: Nitrile rubber

butyl-rubber

Remarks: Choose gloves to protect hands against chemicals depending

on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end

of workday.

Eye protection: Wear the following personal protective equipment:

Chemical resistant goggles must be worn.

If splashes are likely to occur, wear: Face-shield

Skin and body protection: Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Hygiene measures Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid
Color: yellow
Odor solvent-like

Odor Threshold: No data available pH: No data available Melting point/freezing point: No data available Initial boiling point and No data available

boiling range:

Flash point: 71 °C

Method: Cleveland open cup

Evaporation rate:

Flammability (solid, gas)

Upper explosion limit:

Lower explosion limit:

Vapour pressure:

Relative vapour density:

No data available

Water solubility: soluble Solubility in other solvents soluble

Solvent: organic solvents



Partition coefficient: Not applicable

n-octanol/water:

Auto-ignition temperature: No data available
Thermal decomposition: No data available
Viscosity, dynamic: 5 - 15 mPa.s (25 °C)

Explosive properties: Not explosive

Oxidizing properties: The substance or mixture is not classified as oxidizing.

9.2 Other information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: Combustible liquid.

Vapours may form explosive mixture with air.

Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid: Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid: Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes Inhalation Skin contact Ingestion Eye contact

of exposure:

Acute toxicity: Not classified based on available information.

<Bis(2-ethoxyethyl) ether>

Acute oral toxicity: LD50 (Rat): 4,970 mg/kg

<y-butyrolactone>

Acute oral toxicity: LD50 (Rat): 1,582 mg/kg
Acute dermal toxicity: LC50 (Rat): > 5.1 mg/l
Exposure time: 4 h

Test atmosphere: dust/mist

<(2-Methoxymethylethoxy)propanol>

Acute oral toxicity LD50 (Rat): > 5,000 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity LC50 (Rat): > 5.296 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: he substance or mixture has no acute inhalation toxicity

Acute dermal toxicity LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation: Causes skin irritation.

<Bis(2-ethoxyethyl) ether>



Result: Skin irritation

Remarks: Based on data from similar materials

<γ-butyrolactone>

Species: Rabbit

Result: No skin irritation

<(2-Methoxymethylethoxy)propanol> Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation: Causes serious eye damage.

<Bis(2-ethoxyethyl) ether>

Species: Rabbit

Method: OECD Test Guideline 405

Result: No eye irritation

<γ-butyrolactone>

Species: Rabbit

Method: OECD Test Guideline 405
Result: Irreversible effects on the eye

<(2-Methoxymethylethoxy)propanol>

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitization: Not classified based on available information. Respiratory sensitisation: Not classified based on available information.

<Bis(2-ethoxyethyl) ether>

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

<γ-butyrolactone>

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative <(2-Methoxymethylethoxy)propanol>

Exposure routes: Skin contact
Species: Humans
Result: negative

Germ cell mutagenicity Not classified based on available information.

<Bis(2-ethoxyethyl) ether>

Genotoxicity in vitro Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials



<y-butyrolactone>

Genotoxicity in vitro Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

<(2-Methoxymethylethoxy)propanol>

Genotoxicity in vitro Test Type: Chromosome aberration test in vitro

Result: negative

Not classified based on available information. Carcinogenicity

<y-butyrolactone>

Species: Rat

Application Route: Ingestion Exposure time: 103 weeks Result: negative <(2-Methoxymethylethoxy)propanol>

Species: Rat

Application Route: inhalation (vapour)

Exposure time: 2 Years

OECD Test Guideline 453 Method:

Result: negative

IARC No ingredient of this product present at levels greater than or equal to

0.1% is identified as probable, possible or confirmed human carcinogen

by IARC.

No ingredient of this product present at levels greater than or equal to **ACGIH**

0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

No ingredient of this product present at levels greater than or equal to **OSHA**

0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or equal to

0.1% is identified as a known or anticipated carcinogen by NTP.

<Nickel-based pigment>

The product contains a nickel-based pigment. Nickel compounds are known to be human carcinogens based on studies in humans, indicates a causal relationship between exposure to nickel compounds and human cancer. Nickel compounds are carcinogenic to humans (Group 1;

The nickel ingredient has shown to be negative in a mutagenicity and a chromosome aberration

study.

Not classified based on available information. Reproductive toxicity

<Bis(2-ethoxyethyl) ether>

Effects on fertility Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Test Type: Embryo-foetal development

development Species: Rabbit

Application Route: Ingestion

Result: negative

<y-butyrolactone>

Effects on foetal

Effects on fertility Test Type: Combined repeated dose toxicity study with

the reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422



Result: negative

Remarks: Based on data from similar materials

Effects on foetal

Test Type: Embryo-foetal development

development Species: Rat

Application Route: Ingestion

Result: negative

<(2-Methoxymethylethoxy)propanol>

Effects on fertility Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: inhalation (vapour) Method: OECD Test Guideline 416

Result: negative

Effects on foetal Test Type: Embryo-foetal development

development Species: Rat

Application Route: inhalation (vapour)

Result: negative

STOT - single exposure: Not classified based on available information.

<γ-butyrolactone>

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure: Not classified based on available information.

Repeated dose toxicity

<Bis(2-ethoxyethyl) ether>

Species: Rat

NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 w

Method: OECD Test Guideline 412

<γ-butyrolactone>

Species: Rat

NOAEL: 225 mg/kg
Application Route: Ingestion
Exposure time: 13 w
<(2-Methoxymethylethoxy)propanol>

Species: Rat

NOAEL: 1.21 mg/l

Application Route: inhalation (vapour)

Exposure time: 13 w

Method: OECD Test Guideline 413

Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

<Bis(2-ethoxyethyl) ether>

Toxicity to fish: LC50 : > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic LC50 : 6,600 mg/l

invertebrates: Exposure time: 96 h Toxicity to bacteria: NOEC : > 1,000 mg/l

Exposure time: 3 h



Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic EC10: 7.38 mg/l invertebrates (Chronic toxicity): Exposure time: 7 d

Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

<γ-butyrolactone>

Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): 56 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic EC50 (Daphnia magna (Water flea)): > 500 mg/l

invertebrates: Exposure time: 48 h

Toxicity to algae: EC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l

Exposure time: 72 h

NOEC (Desmodesmus subspicatus (green algae)): 31.25 mg/l

Exposure time: 72 h

Toxicity to bacteria: IC50 : 4,518 mg/l

Exposure time: 40 h

<(2-Methoxymethylethoxy)propanol>

Toxicity to fish: LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic EC50 (Daphnia magna (Water flea)): 1,919 mg/l

invertebrates: Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae: EC50 (Selenastrum capricornutum (green algae)): > 969 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to bacteria: EC50 (Pseudomonas putida): 4,168 mg/l

Exposure time: 18 h

Toxicity to daphnia and other aquatic NOEC: >= 0.5 mg/l invertebrates (Chronic toxicity): Exposure time: 22 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

12.2 Persistence and degradability

<Bis(2-ethoxyethyl) ether>

Biodegradability: Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

<γ-butyrolactone>

Biodegradability: Result: Readily biodegradable.

Biodegradation: 77 % Exposure time: 14 d

Method: OECD Test Guideline 301C

<(2-Methoxymethylethoxy)propanol>

Biodegradability: Result: Readily biodegradable.

Biodegradation: 96 % Exposure time: 28 d

Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

<Bis(2-ethoxyethyl) ether>

Partition coefficient: n-octanol/water: log Pow: 0.39

<γ-butyrolactone>



Partition coefficient: n-octanol/water: log Pow: -0.566

<(2-Methoxymethylethoxy)propanol>

Partition coefficient: n-octanol/water: log Pow: 0.004

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Dispose of in accordance with local regulations.

Contaminated packaging: Dispose of as unused product.

Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulation

UNRTDG Not regulated as a dangerous good Not regulated as a dangerous good IMDG-Code Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR UN/ID/NA number:NA 1993

Proper shipping name: COMBUSTIBLE LIQUID, N.O.S. (bis(2-ethoxyethyl)ether, (2-Methoxymethylethoxy)propanol)

Class:CBL
Packing group:III
Labels:None
ERG Code:128
Marine pollutant:no

Remarks: Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or

equal to 119 gallons (450 liters).

15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Fire Hazard

Acute Health Hazard

SARA 302: No chemicals in this material are subject to the reporting

requirements of SARA Title III, Section 302.

SARA 313: The following components are subject to reporting levels

established by SARA Title III, Section 313:



bis(2-ethoxyethyl)ether 112-36-7 75 %

US State Regulations

Pennsylvania Right To Know

bis(2-ethoxyethyl)ether 112-36-7 70 - 80 %

(2-Methoxymethylethoxy)propanol

34590-94-8 <10% y-Butyrolactone <10 % 96-48-0

New Jersey Right To Know

bis(2-ethoxyethyl)ether 112-36-7 70 - 80 %

(2-Methoxymethylethoxy)propanol

34590-94-8 <10% y-Butyrolactone <10 % 96-48-0

Proposition 65: WARNING! This product contains a chemical known in the

State of California to cause cancer.

Nickel compounds

NFPA Hazard Rating Health (2), Flammability (2), Instability(0), Other (0)

Health (3), Flammability (2), Physical Hazard (0), Other (0) **HMIS Hazard Rating**

16. OTHER INFORMATION

ACGIH: USA. ACGIH Threshold Limit Values (TLV) **NIOSH REL:** USA. NIOSH Recommended Exposure Limits

OSHA Z-1: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits

for Air Contaminants

ACGIH / TWA: 8-hour, time-weighted average ACGIH / STEL: Short-term exposure limit

NIOSH REL / TWA: Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

NIOSH REL / ST: STEL - 15-minute TWA exposure that should not be exceeded

at any time during a workday

OSHA Z-1 / TWA: 8-hour time weighted average

Sources of key data used to compile the Material Safety Data Sheet:

Internal technical data, data from raw material SDSs, OECD eChem Portal search

results and European Chemicals Agency, http://echa.europa.eu/

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.