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Safety Data Sheet (SDS)

Section 1 - CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier Ink-3131K
Product Code 3131K
Reference Number 49

Name of Supplier Hitachi Industrial Equipment Systems Co.,Ltd.

Address 1-1 Higashitaga-cho 1-chome,Hitachi-shi, Ibaraki-ken,

316-8502 Japan

Department in Charge IJP ink Group, Marking Systems and Hoist Systems Division

Phone Number +81-294-36-8682 Fax Number +81-294-36-8975

Mail Address aida-kohhei@hitachi-ies.co.jp

Emergency Phone

Number

+81-294-36-8682

Recommended Use Industrial ink jet printers
Restriction on Use If the product is to be us

If the product is to be used for applications other than those recommended, seek the judgment of an expert/chemical substance

specialist, etc.

Section 2 - HAZARDS IDENTIFICATION GHS Classification of the Chemical

Physicochemical Flammable liquids Category 2

Health Hazards Serious eye damage/eye irritation Category 1

Carcinogenicity Category 1A
Reproductive toxicity Category 1A

Specific target organ toxicity (single exposure)
Category 2(systemic toxicity, central nervous system)

Specific target organ toxicity (single exposure)
Category 3(narcotic effect, respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Category 1 (liver)

Specific target organ toxicity (repeated exposure) Category 2(blood, central nervous system)

Environmental Hazards

Hazardous to the aquatic environment, short-term

(acute) Category 3

Hazardous to the aquatic environment, long-term

(chronic) Category 3

Other hazards than mentioned above are Not classified

or Classification not possible.

GHS Label Elements

Pictograms



Signal Word Danger

Hazard Statements H225 Highly flammable liquid and vapour

H318 Causes serious eye damage H335 May cause respiratory irritation H336 May cause drowsiness or dizziness

H350 May cause cancer

H360 May damage fertility or the unborn child H371 May cause damage to systemic toxicity, central

nervous system

H372 Causes damage to liver through prolonged or repeated exposure

H373 May cause damage to blood, central nervous system through prolonged or repeated exposure

H412 Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

Obtain special instructions before use.(P201)

Do not handle until all safety precautions have been

read and understood.(P202)

Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking.(P210)

Keep container tightly closed.(P233)
Ground and bond container and receiving

equipment.(P240)

Use explosion-proof electrical, ventilating and lighting

equipment.(P241)

Use non-sparking tools.(P242)

Take action to prevent static discharges.(P243)

Do not breathe

dust/fume/gas/mist/vapours/spray.(P260)

Avoid breathing

dust/fume/gas/mist/vapours/spray.(P261) Wash hand thoroughly after handling.(P264) Do not eat, drink or smoke when using this

product.(P270)

Use only outdoors or in a well-ventilated area.(P271)

Avoid release to the environment.(P273) Wear protective gloves/protective clothing/eye

protection/face protection.(P280)

Response

IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water or shower.(P303+P361+P353)

IF INHALED: Remove person to fresh air and keep

comfortable for breathing.(P304+P340)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.(P305+P351+P338)

IF exposed or concerned: Call a doctor.(P308+P311)

IF exposed or concerned: Get medical advice/attention.(P308+P313)

Immediately call a doctor.(P310)

Call a doctor if you feel unwell.(P312)

Get medical advice and attention if you feel

unwell.(P314)

In case of fire: Use appropriate media to

extinguish.(P370+P378)

Storage Store in a well-ventilated place. Keep container tightly

closed.(P403+P233)

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

Store locked up.(P405)

Disposal Dispose of contents and container in accordance with

local, regional and national regulations (to be

specified).(P501)

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Distinction of Substance or

Mixture

М	E	Χī	tι	ır	е

Chemical Name or Generic	Concentration or Its Formula		ENCS No./ISHL No.		CAS RN
Name	Ranges (wt%)		ENCS No.	ISHL No.	
Ethanol	50-60	СН3СН2ОН	(2)–202	Registered	64-17-5
Isopropyl alcohol	1-3	CH3CH(OH)CH3	(2)–207	Registered	67-63-0
n-Propyl alcohol	5-10	CH3CH2CH 2OH	(2)–207	Registered	71-23-8
Ethyl propanoate	20-30	CH3CH2CO OC2H5	(2)-774	Registered	105-37-3
lithium nitrate	0.1-1	LiNO3	(1)-765	Registered	7790-69-4
Chromium and its compounds	3-5	_	Registered(Trade secret)	Registered(Trade secret)	Trade secret

Section 4 - FIRST AID MEASURES

Inhalation IF INHALED: Remove to fresh air and keep at rest in a

position comfortable for breathing.

IF exposed or concerned: Call a doctor.
Skin Contact

IF ON SKIN (or hair): Remove/Take off

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

If skin irritation occurs: Get medical advice and

attention.

IF exposed or concerned: Call a doctor.

Eye Contact Immediately call a doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

IF exposed or concerned: Call a doctor.

Ingestion Rinse mouth.

IF SWALLOWED: Call a doctor if you feel unwell.

IF exposed or concerned: Call a doctor.

Section 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing

Media

When dust occurs, use dry sand.

Unsuitable Extinguishing

Media

Specific Hazards in Case of

Fire

Specific Fire Fighting

Risk of producing harmful gases such as carbon

monoxide. Avoid inhalation of smoke or gases. Fight fire from upwind position if possible

Keep away from sources of ignition and use appropriate

Use extinguishing agent suitable for type of surrounding

extinguishing media.

Prohibit unauthorized staff from entering the area

around the fire.

Cylindric water.

fire.

Keep unnecessary people away.

Use goggles in combination with dust mask, and another

protections as appropriate to situation.

Equipment and Precautions for Fire Fighters

Special Protective

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Use goggles in combination with dust mask, and another

protections as appropriate to situation.

Large spills :Evacuate area. Ensure adequate ventilation.

Environmental Precautions Do not discharge into the drains, surface waters or

ground water directly.

Methods and Equipment for Containment and Cleaning

Up

Storage

Prevention Measures for Secondary Accidents

No information available

Keep away from sources of ignition and prepare extinguishing media.

Section 7 - HANDLING AND STORAGE

Handling Technical Measures

Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION".

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Use explosion-proof electrical/ventilating/lighting.

Take precautionary measures against static discharge.

Use local exhaust ventilation in case of production of

fume or mist.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Precautions for Safe Handling Keep cool.

Do not breathe dust/fume/gas/mist/vapours/spray.

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye

protection/face protection.

Prevents Handling of Incompatible

Substances or Mixtures

Refer to "Section 10 - STABILITY AND REACTIVITY".

Conditions for Safe

Storage

Refer to "Section 10 - STABILITY AND REACTIVITY".

Store locked up

Store container tightly closed in well-ventilated place.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

	Japan Administration Level	Exposure Limits (Japan Society for Occupational Health)	TLVs (ACGIH)
Ethanol	Not listed	Not listed	TWA -, STEL 1000 ppm
Isopropyl alcohol	200ppm	[Maximum allowable concentration] 400ppm (980mg/m3)	TWA 200 ppm, STEL 400 ppm
n-Propyl alcohol	Not listed	Not listed	TWA 100 ppm, STEL -
Ethyl propanoate	Not listed	Not listed	Not listed
lithium nitrate	Not listed	Not listed	Not listed
Chromium and its compounds	Not listed	0.5mg/m3 as Cr3+	Not listed

	Concentration standards specified by the Minister of Health, Labour and Welfare		
	Concentration standard value for 8-hours exposure	Concentration standard value for short- term exposure/ceiling	
Ethanol	Not listed	Not listed	
Isopropyl alcohol	Not listed	Not listed	
n-Propyl alcohol	Not listed	Not listed	
Ethyl propanoate	Not listed	Not listed	
lithium nitrate	Not listed	Not listed	

Chromium and its	Not listed	Not listed
compounds		

TLVs (ACGIH) can be referenced at: https://www.acgih.org/

Engineering Controls

Use local exhaust ventilation in case of production of

fume or mist.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Use explosion-proof electrical equipment and prevent

from static electrocity.

Personal Protective Equipment

Respiratory Protection Select and wear appropriate respiratory protective equipment based on risk assessments and other

measures.

Hand Protection Wear appropriate protective equipment, including

impervious or impermeable safety gloves, as

circumstances dictate.

Select and wear appropriate safety gloves based on risk

assessments and other measures.

Eye/Face Protection Select and wear appropriate face and eye protection

based on risk assessments and other measures.

Skin and Body Protection Wear appropriate protective equipment such as impervious and impermeable protective clothing and

footwear, as circumstances dictate.

Select and wear appropriate protective clothing and footwear based on risk assessments and other

measures.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Form Liquid
Colour Black
Odour Solvent odor

Melting Point/Freezing -114.5 °C (as Ethanol)

Point

Boiling Point or Initial 78.3°C (as Ethanol)

Boiling Point and Boiling

Ranges

Flammability
Lower and Upper Explosion Lower Limit
Flammability
3.3vol% (as Ethanol)

Limit / Flammability Limit

Upper Limit 19vol% (as Ethanol) 7.7°C (Tag Closed Cup)

Auto-Ignition Temperature 363°C (as Ethanol)

Decomposition No data available

Temperature

Flash Point

pH No data available Kinematic Viscosity 3.5mm2/s

Solubility water soluble in any(as Ethanol)

Partition Coefficient : n- -0.31 (as Ethanol)

Octanol/Water

Vapour Pressure 5.9kPa (20°C)(as Ethanol)

Density and/or Relative 0.86

Density

Relative Gas Density 1.59 (Air=1, as Ethanol)
Particle Characteristics No data available

as Ethanol

Boiling Point or Initial

Boiling Point and Boiling

Ranges

Density and/or Relative 0.7892(20°C, 4°C)

Density

as Isopropyl alcohol

Boiling Point or Initial

Boiling Point and Boiling

Ranges

Density and/or Relative 0.7863(20°C, 20°C)

Density

as n-Propyl alcohol

Boiling Point or Initial 97.4°C, 49.92°C(90mmHg), 30.35°C(28.5mmHg)

78.3°C

82.4°C

Boiling Point and Boiling

Ranges

Density and/or Relative 0.8035(20°C/4°C)

Density

as Ethyl propanoate

Boiling Point or Initial 99.1°C

Boiling Point and Boiling

Ranges

Density and/or Relative 0.8830(20°C/4°C)

Density

as lithium nitrate

Melting Point/Freezing 261°C

Point

Decomposition 600°C

Temperature

Kinematic Viscosity 0mm2/S(40°C)
Density and/or Relative 2.37(20°C, 4°C)

Density

Section 10 - STABILITY AND REACTIVITY

Reactivity Does not react dangerously under nomal conditions.

Chemical Stability Stable under normal conditions of use.

Possibility of Hazardous Flammable

Reaction

Conditions to Avoid There is a risk of explosion due to impacts, friction, flame and other

source of ignition.

Incompatible Substances or No data available

Mixtures

Hazardous Decomposition No data available

Products

Other Data No data available

Section 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity Oral Classification not possible since lots of the

concentrations of unknown ingredients.
Classification not possible since lots of the

Dermal Classification not possible since lots of the concentrations of unknown ingredients.

Inhalation (gas)

Does not fall under gas based on GHS definitions.

(vapour)

Classification not possible since lots of the concentrations of unknown ingredients.

(dust and mist)

Classification not possible since lots of the concentrations of unknown ingredients.

Classification not possible since lots of the concentrations of unknown ingredients.

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Classified as Category 1 since the sum of Eye Category

1 ingredients is more than 3%.

Respiratory Sensitization Classification not possible since lots of the

concentrations of unknown ingredients.

Skin Sensitization Classification not possible since lots of the

concentrations of unknown ingredients.

Germ Cell Mutagenicity Classification not possible since lots of the

concentrations of unknown ingredients.

Carcinogenicity Classified as Category 1A since one of the Category 1A

ingredients is more than 0.1%.

Reproductive Toxicity (Reproductive toxicity)

Classified as Category 1A since one of the Category 1A

ingredients is more than 0.3%.

(Reproductive toxicity, effects on or via lactation)

Classification not possible since lots of the concentrations of unknown ingredients.

Specific Target Organ

Classified as Category 2(systemic toxicity) since one of the Category 1(systemic toxicity) ingredients is 1 to

10%.

Classified as Category 2(central nervous system) since

one of the Category 1(central nervous system)

ingredients is 1 to 10%.

Classified as Category 3(narcotic effect) since the sum of Category 3(narcotic effect) ingredients is more than

20%.

Classified as Category 3(respiratory tract irritation) since the sum of Category 3(respiratory tract irritation)

ingredients is more than 20%.

Specific Target Organ

Classified as Category 1(liver) since one of the Category 1(liver) ingredients is more than 10%.

Exposure)

Aspiration Hazard

Classified as Category 2(central nervous system) since

one of the Category 2(central nervous system)

ingredients is more than 10%.

Classified as Category 2(blood) since one of the Category 1(blood) ingredients is 1 to 10%.

Classification not possible since lots of the concentrations of unknown ingredients.

Section 12 - ECOLOGICAL INFORMATION

Hazardous to the Aquatic Environment, Short-Term

(Acute)

Hazardous to the Aquatic Environment, Long-Term

(Chronic)
Ecotoxicity
Persistence

Bioaccumulative Potential

Mobility in Soil

Hazardous to the Ozone

Layer

Classified as Category 3 since the sum of (M \times 100 \times Category 1) + (10 \times Category 2) + Category 3

ingredients is more than 25%.

Classified as Category 3 since the sum of $(M \times 100 \times Category 1) + (10 \times Category 2) + Category 3$

ingredients is more than 25%.

No data available No data available No data available

No data available

Unable to classify due to insufficient data.

Section 13 - DISPOSAL CONSIDERATIONS

Residual waste

Because waste materials such as liquid waste, paper towels used to wipe it up, or empty containers are flammable combustible materials, the section on "specially controlled industrial waste(Flammable waste oil)" from the Waste Management and Public Cleaning Law (Waste Management Law) is applicable.

Either appropriately process in accordance with Waste Management and Public Cleaning Law, or commission a contractor licensed for transport or disposal of industrial waste requiring special management.

Do not let wastewater, etc. used for cleaning machinery or containers flow directly onto the groundor in to the culverts. For waste materials generated by wastewater treatment, incineration, etc. either carry out processingin accordance with the Waste Management and Public Cleaning Law and related laws and regulations, or commission a licensed vendor to do so.

When incinerating of waste materials, etc., do not use an incinerator without cleaning equipment, as harmful gas will be generated.

Clarify the contents of waste materials and entrust disposal to a waste disposal company.

Contaminated containers and packaging

Empty containers should be treated as industrial wastes and not

allowed to contain waste.

Section 14 - TRANSPORT INFORMATION

International Regulations

Regulatory Conform to the provisions of IMO.

Information by Sea

UN No. 1210

Proper Shipping Name PRINTING INK RELATED MATERIAL

Class 3
Packing Group II

Marine Pollutant
Liquid Substance
Not applicable
Not applicable

Transported in Bulk According to MARPOL 73/78, Annex II, the IBC

Code

Regulatory Conform to the provisions of ICAO/IATA.

Information by Air

UN No. 1210

Proper Shipping Name PRINTING INK RELATED MATERIAL

Class

Packing Group II

Regulations in Japan Regulatory Complies with the Fire Service Act.

Information by Road

Regulatory Conform to the provisions of the Ship Safety Law.

Information by Sea

UN No. 1210

Proper Shipping Name PRINTING INK RELATED MATERIAL

Class 3 Packing Group II

Marine Pollutant Not applicable Liquid Substance Not applicable

Transported in Bulk According to MARPOL 73/78, Annex II, the IBC

Code

Regulatory Conform to the provisions of the Civil Aeronautics Law.

Information by Air

UN No. 1210

Proper Shipping Name PRINTING INK RELATED MATERIAL

Class 3
Packing Group II
130

Emergency Response Guide

Number

Section 15 - REGULATORY INFORMATION Industrial Safety and Health

the standards for work environment monitoring Article 65 part 2-1

Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.

(Article 57 part 1, Order Article 18 part 1 and 2, Attached Table9)

Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.

(Article 57 part 1, Order Article 18 part 1 and 2, Attached Table9)

Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.

(Article 57 part 1, Order Article 18 part 1 and 2, Attached Table9)

Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.

(Article 57 part 1, Order Article 18 part 1 and 2, Attached Table9)

Dangerous Substances -Flammable substances(Order Article Appended Table 1 part 4)

Hazardous Substances to be notified in terms of Whose Names, etc .(Article 57 part 2, Order Article 18 part 2–1 and part 2, Attached Table9)

Hazardous Substances to be notified in terms of Whose Names, etc .(Article 57 part 2 ,Order Article 18 part 2-1 and part 2, Attached Table9)

Ethanol(Number: 61) (Trade Secrets)

Hazardous Substances to be notified in terms of Whose Names, etc .(Article 57 part 2 ,Order Article 18 part 2-1 and part 2, Attached Table9)

Chromium and its compounds (excluding chromic acid and chromate and dichromate and dichromate) (Trade Secrets)

Hazardous Substances to be notified in terms of Whose Names, etc .(Article 57 part 2, Order Article 18 part 2–1 and part 2, Attached Table 9)

Propyl alcohol (Number: 494) (Trade Secrets) Lithium Nitrate (Number: 310) (Trade Secrets)

Materials for special medical examinations and current handling workers(Industrial Safety and Health Act66 2 and Order for Enforcement of Industrial Safety and Health Act Article 22 (i))

Chemical substances that damage the skin, etc. / Harmful substances that cause skin irritation (Article 594–2, Paragraph 1 of the Safety and Health Regulations, No. 0531 No. 9 issued on May 31, 2020, No. 0704 issued on July 4, 2020) List of substances applicable to No. 1 and 5)

n-Propyl alcohol

Chemical substances that damage the skin, etc., and harmful substances that absorb the skin (List of substances subject to Article 594–2, Paragraph 1 of the Safety and Health Regulations, 0531–9 issued on May 31, Reiwa 4, and 0704–1 and 5 of July 4, Reiwa 5)

Propyl alcohol

Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.

(Article 57 part 1, Order Article 18 part 1 and 2, Attached Table9)

Industrial Safety and Health Act(after 2024/4/1)

Substances subject to obligation such as labeling and SDS issuance based on the Industrial Safety and Health Act (scheduled to come into effect on April 1,

Reiwa 8)

Poisonous and Deleterious Substances Control Act Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the **Environment and Promotion** of Improvements to the Management Thereof

Act on the Regulation of Manufacture and Evaluation of Chemical Substances

Fire Service Act

Water Pollution Prevention

Foreign Exchange and Foreign Trade Act Ship Safety Law **Aviation Law**

Section 16 - OTHER INFORMATION

Hazardous Substances to be notified in terms of Whose Names, etc .(Article 57 part 2, Order Article 18 part 2-1 and part 2, Attached Table9)

Chromium and its compounds (excluding hexavalent chromium compounds)(Trade Secrets)

Dangerous goods and hazardous goods for which the name, etc. should be indicated (Article 57, Paragraph 1 of the Act, Article 18, Item 2 ~ Item 3 of the Enforcement Order, Appended Table 2 of Article 30 of the Safety and Health Regulations)

Dangerous goods and hazardous goods whose names, etc. should be notified (Article 57-2, Paragraph 1 of the Act, Article 18-2, Item 2 Item 3 of the Enforcement Order, Article 34-2 Appended Table 2 of the Safety and Health Regulations)

Ethyl propionate (Ordinance on Industrial Safety and Health Number of Appended Tables 2:1775) (Trade Secrets)

Organic Solvent Poisoning Prevention Regulations Article 1-2 (Class 2 Organic Solvents, etc.), Enforcement Ordinance Appendix 6-2 Not applicable

Not applicable

Not applicable

Mmonitoring chemical substances (Article 2, Paragraph 4 of the Act)

Priority Assessment Chemical Substances(Article 2 part 5) Hazardous Materials Category IV inflammable liquids Class I petroleums non water-soluble Packing Group II Hazardous substances (Article 2, Ordinance of Enforcement, article 2, Ordinance 1) that prescribe wastewater standards) Specified substances (article 2, paragraph 4 of the Act, article 3 of the Enforcement Ordinance) Import Trade Control Order Appended Table I part 16

Flammable liquids(Order Article 3,Appended Table I) Flammable liquids(Order Article 194,Appended Table I)

Second-class organic solvents, etc.contain more than 5% of Secondclass organic solvents.

In the case where "composition and ingredient information" corresponds to the secret of the business, the description of the content is the conventional range display. However, it is possible to notify us separately by the method of information transmission agreed with the customer, such as a confidentiality agreement. For more information, please contact our sales representative.

Isopropyl alcohol belongs to propyl alcohol. We have a Priority Assessment Chemical Substance posting threshold of 0.1% or more.

The posting of a Priority Assessment Chemical Substance in SDS is as of November 2019 as an effort.

of Manufacture and Evaluation of Chemical Substances

Industrial Safety and

Act on the Regulation

Health Act

Foreign Exchange and In law, printing inks are not approved for export

Foreign Trade Act

Fire Service Act Poisonous and Deleterious

The flash point of Class I petroleums is less than 21 ° c. The deleterious substances is only applicable to the material, and the mixture is non-applicable.

Substances Control

Act

Substances treated as equipment are exempt from this law. Cd<100ppm Pb, Hg, Cr(VI), PBB, PBDE, DEHP, DBP, BBP, DIBP

RoHS Specified Substance Concentration

<1000ppm

Allowable concentration Standards Cited Literature TLV-TWA: Threshold Limit Values-Time Weighted Average STEL

(Short Term Exposure Limit

JIS Z7253:2019

1) International Chemical Safety Cards

2) National Institute of Technology and Evaluation (NITE), Japan

3) Site for Safe Workplace by Ministry of Health, Labour and Welfare, Japan 4) EZSDS (JCDB)

Additional Information about This Product:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.