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Safety Data Sheet (SDS)

Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier	Ink-1065K
Product Code	1065K
Reference Number	12
Name of Supplier	Hitachi Industrial Equipment Systems Co.,Ltd.
Address	1-1 Higashitaga-cho 1-chome,Hitachi-shi, Ibaraki-ken, 316-8502 Japan
Company Contact	IJP ink Group, Marking Systems and Hoist Systems Division
Phone Number	+81-294-36-8682
Fax Number	+81-294-36-8975
Mail Address	ogino-masahiko@hitachi-ies.co.jp
Emergency Phone Number	+81-294-36-8682
Recommended Use	Industrial ink jet printers

Section 2 – HAZARDS IDENTIFICATION

GHS Classification of the Chemical

Physicochemical	Flammable liquids Category 2
Health Hazards	Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 1 Skin sensitization Category 1 Reproductive toxicity Category 1A Specific target organ toxicity (single exposure) Category 1 (visual organ systemic toxicity central nervous system) Specific target organ toxicity (single exposure) Category 2 (kidney) Specific target organ toxicity (single exposure) Category 3 (narcotic effect respiratory tract irritation)
Environmental Hazards	Specific target organ toxicity (repeated exposure) Category 1 (visual organ central nervous system peripheral nervous system) Specific target organ toxicity (repeated exposure) Category 2 (respiratory apparatus) 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
 H315 Causes skin irritation
 H317 May cause an allergic skin reaction
 H318 Causes serious eye damage
 H335 May cause respiratory irritation
 H336 May cause drowsiness or dizziness
 H360 May damage fertility or the unborn child
 H370 Causes damage to visual organ, systemic toxicity, central nervous system

H371 May cause damage to kidney
 H372 Causes damage to visual organ, central nervous system, peripheral nervous system through prolonged or repeated exposure
 H373 May cause damage to respiratory apparatus 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)

Contaminated work clothing should not be allowed out of the workplace.(P272)
 Avoid release to the environment.(P273)
 Wear protective gloves/protective clothing/eye protection/face protection.(P280)

Response

IF ON SKIN: Wash with plenty of soap and water.(P302+P352)
 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)
 Specific treatment.(P321)
 If skin irritation occurs: Get medical advice/attention.(P332+P313)
 If skin irritation or rash occurs: Get medical advice/attention.(P333+P313)
 Take off contaminated clothing and wash it before reuse.(P362+P364)

	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)
Disposal	Store locked up.(P405) 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

Chemical Name or Generic Name	Concentration or Its Ranges (%)	Formula	ENCS No./ISHL No.		CAS RN
			ENCS No.	ISHL No.	
Methyl ethyl ketone	30-less than 40	CH ₃ CH ₂ CO CH ₃	(2)-542	Registered	78-93-3
Methanol	10-20	CH ₃ OH	(2)-201	Registered	67-56-1
2-Hydroxypropyl acrylate	3-5	-	(2)-958,(2)- 997	Registered	999-61-1
Chromium and its compounds	5-10	-	Registered(Trade secret)	Registered(Trade secret)	Trade secret
1,6-Hexanediol Diacrylate	0.1-1	-	(2)-958,(2)- 1007	Registered	13048-33-4
lithium nitrate	0.1-1	LiNO ₃	(1)-765	Registered	7790-69-4

Section 4 – FIRST AID MEASURES

Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	IF exposed or concerned: Call a doctor. 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 or rash occurs, get medical advice and attention. Specific treatment.
Eye Contact	IF exposed or concerned: Call a doctor. 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.
Ingestion	IF exposed or concerned: Call a doctor. 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	Use extinguishing agent suitable for type of surrounding fire. When dust occurs, use dry sand.
Unsuitable Extinguishing Media	Cylindric water.
Specific Hazards in Case of Fire	Risk of producing harmful gases such as carbon monoxide. Avoid inhalation of smoke or gases.
Specific Fire Fighting	Fight fire from upwind position if possible Keep away from sources of ignition and use appropriate extinguishing media.

As far as we know, the information that is listed here is accurate. However, the above-mentioned suppliers or their subsidiaries shall not be liable for the accuracy or completeness of the information described above.

Special Protective Equipment and Precautions for Fire Fighters
 Prohibit unauthorized staff from entering the area around the fire.
 Keep unnecessary people away.
 Use goggles in combination with dust mask, and another protections as appropriate to situation.

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.

Environmental Precautions
 Large spills :Evacuate area.
 Ensure adequate ventilation.
 Do not discharge into the drains, surface waters or ground water directly.

Methods and Equipment for Containment and Cleaning Up
 small spill : absorb with material such as non-combustible material wash thoroughly after handling

Prevention Measures for Secondary Accidents
 Large spills: Dike spills and dispose of in safe area.
 Keep away from sources of ignition and prepare extinguishing media.
 Risk of slipping. Spilled material forms slippery floor.
 Do not recklessly walk on the spillage.

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
 Contaminated work clothing should not be allowed out of the workplace.
 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".

Storage 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)	Exposure Limits (ACGIH)

Methanol	200ppm	200ppm(260mg/m3)(skin)	TWA 200 ppm, STEL 250 ppm (Skin)
Methyl ethyl ketone	200ppm	200ppm(590mg/m3)	TWA 200 ppm, STEL 300 ppm
2-Hydroxypropyl acrylate	-	-	TWA 0.5 ppm, STEL - (Skin)
lithium nitrate	-	-	-
1,6-Hexanediol Diacrylate	-	-	-
Chromium and its compounds	-	0.5mg/m3 as Cr3+	-

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 electricity.

Personal Protective Equipment

Respiratory Protection

If necessary, wear respiratory protection.

Hand Protection

Wear protective gloves.

Eye/Face Protection

Wear eye protection/face protection.

Skin and Body Protection

Wear protective clothing.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Form

Liquid

Colour

Black

Odour

Solvent odor

Melting Point/Freezing Point

No data available

Boiling Point or Initial Boiling Point and Boiling Ranges

100~250 °C

Flammability

No data available

Lower and Upper Explosion Limit / Flammability Limit

Lower Limit
1.1vol%

Upper Limit

19vol%

Flash Point

-1.1°C (Tag Closed Cup)

Auto-Ignition Temperature

300°C

Decomposition Temperature

No data available

pH

No data available

Kinematic Viscosity

No data available

Solubility

No data available

Partition Coefficient : n-Octanol/Water

No data available

Vapour Pressure

0.07kPa (80°C)

Density and/or Relative Density

0.948

Relative Gas Density

No data available

Particle Characteristics

No data available

as Methanol

Melting Point/Freezing Point

-93.9°C

Boiling Point or Initial Boiling Point and Boiling Ranges

64.1°C, 59.4°C(610mmHg), 39.9°C(260mmHg), 15°C (73mmHg)

Density and/or Relative Density

0.866(-59°C/4°C), 0.81(0°C/4°C), 0.8006(10°C/4°C), 0.7910(20°C), 0.7964(15°C/15°C)

as Methyl ethyl ketone

Melting Point/Freezing Point	-86.4°C
Boiling Point or Initial Boiling Point and Boiling Ranges	79.6°C
Density and/or Relative Density	0.8061
as lithium nitrate	
Melting Point/Freezing Point	261°C
Decomposition Temperature	600°C
Kinematic Viscosity	0mm ² /S(40°C)
Density and/or Relative Density	2.37(20°C, 4°C)

Section 10 – STABILITY AND REACTIVITY

Reactivity	Does not react dangerously under normal conditions.
Chemical Stability	Stable under normal conditions of use.
Possibility of Hazardous Reaction	Flammable
Conditions to Avoid	There is a risk of explosion due to impacts, friction, flame and other source of ignition.
Incompatible Substances or Mixtures	No data available
Hazardous Decomposition Products	No data available
Other Data	No data available

Section 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity	Oral	Unable to classify due to insufficient data.
	Dermal	Unable to classify due to insufficient data.
	Inhalation	(gas) Does not fall under gas based on GHS definitions. (vapour) Unable to classify due to insufficient data. (dust and mist) Unable to classify due to insufficient data.
	Skin Corrosion/Irritation	Classified as Category 2 since the sum of Category 2 ingredients is more than 10%.
	Serious Eye Damage/Eye Irritation	Classified as Category 1 since the sum of Eye Category 1 ingredients is more than 3%.
Respiratory Sensitization	Unable to classify due to insufficient data.	
Skin Sensitization	Classified as Category 1 since one of the Category 1 ingredients is more than 1.0%.	
Germ Cell Mutagenicity	Unable to classify due to insufficient data.	
Carcinogenicity	Unable to classify due to insufficient data.	
Reproductive Toxicity	(Reproductive toxicity) Classified as Category 1A since one of the Category 1 ingredients is more than 0.3%. (Reproductive toxicity, effects on or via lactation)	
Specific Target Organ Toxicity (Single Exposure)		Unable to classify due to insufficient data.
		Classified as Category 1(visual organ) since one of the Category 1(visual organ) ingredients is more than 10%.
		Classified as Category 1(systemic toxicity) since one of the Category 1(systemic toxicity) ingredients is more than 10%. Classified as Category 1(central nervous system) since one of the Category 1(central nervous system) ingredients is more than 10%.

As far as we know, the information that is listed here is accurate. However, the above-mentioned suppliers or their subsidiaries shall not be liable for the accuracy or completeness of the information described above.

Specific Target Organ Toxicity (Repeated Exposure)	<p>Classified as Category 2(kidney) since one of the Category 2(kidney) ingredients is more than 10%.</p> <p>Classified as Category 3(narcotic effect) since the sum of Category 3(narcotic effect) ingredients is more than 20%.</p> <p>Classified as Category 3(respiratory tract irritation) since the sum of Category 3(respiratory tract irritation) ingredients is more than 20%.</p> <p>Classified as Category 1(visual organ) since one of the Category 1(visual organ) ingredients is more than 10%.</p>
Aspiration Hazard	<p>Classified as Category 1(central nervous system) since one of the Category 1(central nervous system) ingredients is more than 10%.</p> <p>Classified as Category 1(peripheral nervous system) since one of the Category 1(peripheral nervous system) ingredients is more than 10%.</p> <p>Classified as Category 2(respiratory apparatus) since one of the Category 2(respiratory apparatus) ingredients is more than 10%.</p> <p>Classified as Classification not possible since the kinematic viscosity is unknown.</p>

Section 12 – ECOLOGICAL INFORMATION

Hazardous to the Aquatic Environment, Short-Term (Acute)	Classified as Category 3 since the sum of (M × 100 × Category 1) + (10 × Category 2) + Category 3 ingredients is more than 25%.
Hazardous to the Aquatic Environment, Long-Term (Chronic)	Classified as Category 3 since the sum of (M × 100 × Category 1) + (10 × Category 2) + Category 3 ingredients is more than 25%.
Ecotoxicity	No data available
Persistence	No data available
Bioaccumulative Potential	No data available
Mobility in Soil	No data available
Hazardous to the Ozone Layer	Unable to classify due to insufficient data.

Section 13 – DISPOSAL CONSIDERATIONS

Residual waste	<p>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.</p> <p>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.</p> <p>Do not let wastewater, etc. used for cleaning machinery or containers flow directly onto the ground or in to the culverts. For waste materials generated by wastewater treatment, incineration, etc. either carry out processing in accordance with the Waste Management and Public Cleaning Law and related laws and regulations, or commission a licensed vendor to do so.</p> <p>When incinerating of waste materials, etc., do not use an incinerator without cleaning equipment, as harmful gas will be generated.</p> <p>Clarify the contents of waste materials and entrust disposal to a waste disposal company.</p>
Contaminated container	Empty containers should be treated as industrial wastes and not allowed to contain waste.

Section 14 – TRANSPORT INFORMATION

As far as we know, the information that is listed here is accurate. However, the above-mentioned suppliers or their subsidiaries shall not be liable for the accuracy or completeness of the information described above.

International Regulations	Regulatory Information by Sea	Conform to the provisions of IMO.
	UN No.	1210
	Proper Shipping Name	PRINTING INK RELATED MATERIAL
	Class	3
	Packing Group	II
	Marine Pollutant	Not applicable
	Liquid Substance Transported in Bulk	Not applicable
	According to MARPOL 73/78, Annex II, the IBC Code	
	Regulatory Information by Air	Conform to the provisions of ICAO/IATA.
	UN No.	1210
	Proper Shipping Name	PRINTING INK RELATED MATERIAL
	Class	3
	Packing Group	II
	Regulations in Japan	Regulatory Information by Road
Regulatory Information by Sea		Conform to the provisions of the Ship Safety Law.
UN No.		1210
Proper Shipping Name		PRINTING INK RELATED MATERIAL
Class		3
Packing Group		II
Marine Pollutant		Not applicable
Liquid Substance Transported in Bulk		Not applicable
According to MARPOL 73/78, Annex II, the IBC Code		
Regulatory Information by Air		Conform to the provisions of the Civil Aeronautics Law.
UN No.		1210
Proper Shipping Name		PRINTING INK RELATED MATERIAL
Class		3
Packing Group		II
Emergency Response Guide Number	130	

Section 15 – REGULATORY INFORMATION

Industrial Safety and Health Act

Ordinance on the Prevention of Organic Solvent Poisoning Paragraph 1 Article 1 part 4 (Second-class organic solvents, etc.), Enforcement Ordinance 2 of Appendix 6 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 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 2-1and part 2, Attached Table9)

2-Hydroxypropyl acrylate (Number: 5) (less than 5%)
Chromium and its compounds (excluding Chromic acid, Dichromic acid and its salts)(Number: 142) (1%-10%)
Methanol (Number: 560) (10%-20%)
Methyl ethyl ketone (Number: 570) (30%-40%)

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	lithium nitrate(Number:No Number)) 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))
Poisonous and Deleterious Substances Control Act	poisonous Substances Designation Decree Article 1 2-Hydroxypropyl acrylate and preparations containing the same (3.4%)
Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof(after 2023/4/1)	Class 2 Designated Chemical Substances (Law, Article 2, Paragraph 3, Enforcement Order, Article 2, Appended Table 2)
Fire Service Act	2-Hydroxypropyl acrylate (control number: 755) (3.4%) Hazardous Materials Category IV inflammable liquids Class I petroleum non water-soluble Packing Group II
Water Pollution Prevention Act	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)
Foreign Exchange and Foreign Trade Act	Import Trade Control Order Appended Table I part 16
Ship Safety Law	Flammable liquids(Order Article 3,Appended Table I)
Aviation Law	Flammable liquids(Order Article 194,Appended Table I)

Section 16 – OTHER INFORMATION

Industrial Safety and Health Act	Second-class organic solvents, etc.contain more than 5% of Second-class organic solvents. In the “15. Applicable laws” column, the materials for which label and SDS will be mandated are also listed. (Substance without a decree number.) Reiwa based on 0111 No. 1 from the Kiankahatsu, on January 11, 2022.) 2-butanone and methyl ethyl ketone, MEK and ethyl methyl ketone are the same substances. 1,6-Hexanediol Diacrylate and Hexamethylene diacrylate are the same substance.
Act on the Regulation of Manufacture and Evaluation of Chemical Substances	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.
Foreign Exchange and Foreign Trade Act	In law, printing inks are not approved for export
Fire Service Act	The flash point of Class I petroleum is less than 21 ° c.
Poisonous and Deleterious Substances Control Act	The deleterious substances is only applicable to the material, and the mixture is non-applicable.
RoHS Specified Substance Concentration	Substances treated as equipment are exempt from this law. Cd<100ppm Pb, Hg, Cr(VI), PBB, PBDE, DEHP, DBP, BBP, DIBP <1000ppm
Allowable concentration Standards	TLV-TWA: Threshold Limit Values-Time Weighted Average STEL (Short Term Exposure Limit JIS Z7253:2019
Cited Literature	1) International Chemical Safety Cards 2) National Institute of Technology and Evaluation (NITE), Japan

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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.