Issue 2015.12.15 Revision 2024.09.13

Safety Data Sheet (SDS)

Section 1 - CHEMICALS AND COMPANY IDENTIFICATION

Section 1 – CHEMICALS AND COMPANY IL	I IFICATION	
Chemical Id	tifier Ink-3127K	
Product Co	3127K	
Reference	mber 46	
Name of Su	lier Hitachi Industrial Equipment Systems Co.,I	∟td.
Address	1−1 Higashitaga−cho 1−chome,Hitachi−shi, 316−8502 Japan	Ibaraki-ken,
Departmen	Charge IJP ink Group, Marking Systems and Hoist	Systems Division
Phone Nur	r +81-294-36-8682	
Fax Numbe	+81-294-36-8975	
Mail Addres	aida-kohhei@hitachi-ies.co.jp	
Emergency Number	ione +81-294-36-8682	
Recommen	Use Industrial ink jet printers	
Restriction	Use If the product is to be used for application recommended, seek the judgment of an ex specialist, etc.	
Section 2 – HAZARDS IDENTIFICATION GHS Classification of the Chemical		
Physicoche		
Health Haz	s Serious eye damage/eye irritation Categor Carcinogenicity Category 1A	y 1
	Reproductive toxicity Category 1A	
	Specific target organ toxicity (single expos	
	Category 2(systemic toxicity, central nerv	
	Specific target organ toxicity (single expos	sure)

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)

Other hazards than mentioned above are Not classified or Classification not possible.

GHS Label Elements

Pictograms



Signal WordDangerHazard StatementsH225 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
Precautionary State Prevention	ements 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)
	Take action to prevent static discharges (F243)
	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)
	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
Mixture

Chemical Name or Generic	Concentration or Its	Formula	ENCS No./I	SHL No.	CAS RN
Name	Ranges (wt%)		ENCS No.	ISHL No.	

Ethanol	70-75	CH3CH2OH	(2)-202	Registered	64-17-5
Isopropyl alcohol	3-5	CH3CH(OH)CH3	(2)–207	Registered	67-63-0
n-Propyl alcohol	5-10	CH3CH2CH 2OH	(2)–207	Registered	71-23-8
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 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	Use extinguishing agent suitable for type of surrounding
Media	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.
	Prohibit unauthorized staff from entering the area around the fire.
	Keep unnecessary people away.
Special Protective	Use goggles in combination with dust mask, and another
Equipment and Precautions for Fire Fighters	protections as appropriate to situation.
-	
Section 6 – ACCIDENTAL RELEASE MEASURES	
Personal Precautions, Protective Equipment and	Use goggles in combination with dust mask, and another protections as appropriate to situation.
Emergency Procedures	
3	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	No information available
Containment and Cleaning Up	
Op Prevention Measures for	Keep away from sources of ignition and prepare
Secondary Accidents	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	Keep cool.
	Handling	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".
	C	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)
Not listed	Not listed	TWA -, STEL 1000 ppm
200ppm	【 Maximum allowable concentration 】 400ppm (980mg/m3)	TWA 200 ppm, STEL 400 ppm
Not listed	Not listed	TWA 100 ppm, STEL -
Not listed	Not listed	Not listed
Not listed	0.5mg∕m3 as Cr3+	Not listed
	Level Not listed 200ppm Not listed Not listed	Level Society for Occupational Health) Not listed Not listed 200ppm [Maximum allowable concentration] 400ppm (980mg/m3) Not listed Not listed Not listed Not listed

	Concentration standards specified Welfare	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		
lithium nitrate	Not listed	Not listed		
Chromium and its compounds	Not listed	Not listed		

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.
tion 9 – PHYSICAL AND CH	EMICAL PROPERTIES	
Physical State		Liquid
Form		Liquid
Colour		Black
Odour Malting Daint / Eusening		Solvent odor −114.5 °C(as Ethanol)
Melting Point/Freezing Point		-114.5 C(as Ethanol)
Boiling Point or Initial Boiling Point and Boiling Ranges		78.3°C(as Ethanol)
Flammability		Flammability
Lower and Upper Explosion Limit / Flammability Limit	Lower Limit	3.3vol% (as Ethanol)
	Upper Limit	19vol% (as Ethanol)
Flash Point		12.8°C (Tag Closed Cup)
Auto-Ignition Temperature		363°C (as Ethanol)
Decomposition Temperature		No data available
pН		No data available
Kinematic Viscosity		4.5mm2/s
Solubility Partition Coefficient : n- Octanol/Water		water soluble in any(as Ethanol) −0.31 (as Ethanol)
Vapour Pressure		5.9kPa (20°C)(as Ethanol)
Density and/or Relative Density		0.84
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		78.3°C
Density and∕or Relative Density		0.7892(20°C, 4°C)
as Isopropyl alcohol Boiling Point or Initial Boiling Point and Boiling Ranges		82.4°C
		0.7863(20°C, 20°C)

as n-Propyl alcohol Boiling Point or Initial Boiling Point and Boiling Ranges	97.4°C, 49.92°C(90mmHg), 30.35°C(28.5mmHg)
Density and/or Relative Density	0.8035(20°C/4°C)
as lithium nitrate Melting Point/Freezing Point	261°C
Decomposition Temperature	600°C
Kinematic Viscosity Density and∕or Relative Density	0mm2/S(40°C) 2.37(20°C, 4°C)
Section 10 - STABILITY AND REACTIVITY	
Reactivity Chemical Stability Possibility of Hazardous Reaction	Does not react dangerously under nomal conditions. Stable under normal conditions of use. 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	Classification not possible since lots of the concentrations of unknown ingredients.
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) Unable to classify due to insufficient data.
Skin Corrosion/Irritation	Classification not possible since lots of the
	concentrations of unknown ingredients.
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	Classification not possible since lots of the concentrations of unknown ingredients.
Germ Cell Mutagenicity	Unable to classify due to insufficient data.
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 ingrediants is more than 0.2%
	ingredients is more than 0.3%. (Reproductive toxicity, effects on or via lactation)
	Unable to classify due to insufficient data.
Specific Target Organ Toxicity (Single Exposure)	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 Toxicity (Repeated Category 1(liver) ingredients is more than 10%. Exposure) 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%. Aspiration Hazard Unable to classify due to insufficient data. Section 12 - ECOLOGICAL INFORMATION Hazardous to the Aquatic Classification not possible since lots of the Environment, Short-Term concentrations of unknown ingredients. (Acute) Hazardous to the Aquatic Classification not possible since lots of the Environment, Long-Term concentrations of unknown ingredients. (Chronic) Ecotoxicity No data available Persistence No data available **Bioaccumulative Potential** No data available Mobility in Soil No data available Unable to classify due to insufficient data. Hazardous to the Ozone 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

> 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.

(Waste Management Law) is applicable.

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.

Empty containers should be treated as industrial wastes and not allowed to contain waste.

Section 14 - TRANSPORT INFORMATION International Regulations Regulatory

Information by Sea UN No.

Layer

Conform to the provisions of IMO.

1210

Contaminated

containers and

packaging

	Proper Shipping Name Class Packing Group Marine Pollutant Liquid Substance Transported in Bulk According to MARPOL 73/78, Annex II, the IBC Code	PRINTING INK RELATED MATERIAL 3 II Not applicable Not applicable
	Regulatory Information by Air UN No. Proper Shipping Name	Conform to the provisions of ICAO/IATA. 1210 PRINTING INK RELATED MATERIAL
	Class	3
Regulations in Japan	Packing Group Regulatory Information by Road	II Complies with the Fire Service Act.
	Regulatory Information by Sea	Conform to the provisions of the Ship Safety Law.
	UN No.	1210
	Proper Shipping Name Class	PRINTING INK RELATED MATERIAL 3
	Packing Group	П
	Marine Pollutant Liquid Substance Transported in Bulk According to MARPOL 73/78, Annex II , the IBC Code	Not applicable Not applicable
	Regulatory Information by Air	Conform to the provisions of the Civil Aeronautics Law.
	UN No. Proper Shipping Name Class Packing Group	1210 PRINTING INK RELATED MATERIAL 3 II
Emergency Response Guide Number		130
Section 15 - REGULATORY INF Industrial Safety and Health	ORMATION	the standards for work environment monitoring Article 65 $$ part 2–1 $$
Act		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 2-1and part 2, Attached Table9)

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)

Ethanol(Number:61)(70%-80%)(Trade Secrets) 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)

Chromium and its compounds (excluding chromic acid and chromate and dichromate and dichromate) (Number:142) (less than 5%) (Trade Secrets)

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)

Propyl alcohol (Number: 494) (1%-10%)(Trade Secrets) Lithium Nitrate (Number: 310) (less than 5%) (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)

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)

Chromium and its compounds (excluding hexavalent chromium compounds)(Number:142) (less than 5%) (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)

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

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 Act

Foreign Exchange and Foreign Trade Act		Import Trade Control Order Appended Table I part 16
Ship Safety Law Aviation Law		Flammable liquids(Order Article 3,Appended Table I) Flammable liquids(Order Article 194,Appended Table I)
Section 16 - OTHER INFORMA	TION	
	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.)
		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.
	Act on the Regulation of Manufacture and Evaluation of Chemical Substances	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.
	Foreign Exchange and Foreign Trade Act	In law, printing inks are not approved for export
	Fire Service Act Poisonous and Deleterious Substances Control Act	The flash point of Class I petroleums is less than 21 \degree c. 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 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
	Additional Information	 3) Site for Safe Workplace by Ministry of Health, Labour and Welfare, Japan 4) EZSDS(JCDB) To the best of our knowledge, the information contained herein is
	about This Product:	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.