Issue 2005.08.31 Revision 2024.10.02

Safety Data Sheet (SDS)

Section 1 - CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier Product Code Reference Number Name of Supplier Address	Ink-1063F/Ink-F63 1063F/JP-F63 10 Hitachi Industrial Equipment Systems Co.,Ltd. 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 Fax Number Mail Address Emergency Phone Number	+81-294-36-8682 +81-294-36-8975 aida-kohhei@hitachi-ies.co.jp +81-294-36-8682
Recommended Use Restriction on Use	Industrial ink jet printers 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

	the Chemical	Elemmetale liquide Cotogon 2
	Physicochemical Health Hazards	Flammable liquids Category 2
	nealth nazards	Acute toxicity (Inhalation: vapour) Category 3
		Skin corrosion/irritation Category 2
		Serious eye damage/eye irritation Category 2A
		Carcinogenicity Category 1A
		Reproductive toxicity Category 1A
		Specific target organ toxicity (single exposure) Category 1 (blood, visual organ, central nervous system, 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)
		Specific target organ toxicity (repeated exposure) Category 1 (liver, visual organ, central nervous system, peripheral nervous system)
		Specific target organ toxicity (repeated exposure) Category 2(nervous system, blood)
		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
		H319 Causes serious eye irritation
		H331 Toxic if inhaled
		H335 May cause respiratory irritation
		H336 May cause drowsiness or dizziness
		H350 May cause cancer H360 May damage fertility or the unborn child

	H370 Causes damage to blood, visual organ, central nervous system, central nervous system
	H371 May cause damage to kidney
	H372 Causes damage to liver, visual organ, central
	nervous system, peripheral nervous system through
	prolonged or repeated exposure
	H373 May cause damage to blood, nervous system
	through prolonged or repeated exposure
Precautionary Stateme	
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)
	Wash eye 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: 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)
	Call a doctor.(P311)
	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 eye irritation persists: Get medical advice/attention.(P337+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

Mixture

Chemical Name or Generic	Concentration or Its	Formula	ENCS No./I	SHL No.	CAS RN
Name	Ranges (wt%)		ENCS No.	ISHL No.	
Methyl ethyl ketone	50-60	CH3CH2CO CH3	(2)-542	Registered	78-93-3
Methanol	1–10	CH3OH	(2)-201	Registered	67-56-1
Ethanol	1–10	CH3CH2OH	(2)-202	Registered	64-17-5
2-Propoxyethanol	10–20	CH3CH2CH 2OCH2CH2 OH	(2)-2424	Registered	2807-30-9
Isopropyl alcohol	0.1-1	CH3CH(OH)CH3	(2)-207	Registered	67-63-0

Section 4 - FIRST AID MEASURES IF INHALED: Remove to fresh air and keep at rest in a Inhalation position comfortable for breathing. Call a doctor. IF exposed or concerned: Call a doctor. Specific treatment is urgent. Skin Contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. $\ensuremath{\mathsf{IF}}$ ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice and attention. Specific treatment. IF exposed or concerned: Call a doctor. IF IN EYES: Rinse cautiously with water for several Eye Contact minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. 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 Use extinguishing agent suitable for type of surrounding fire When dust occurs, use dry sand. Unsuitable Extinguishing Cylindric water. Media Specific Hazards in Case of Risk of producing harmful gases such as carbon Fire 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 Equipment and Precautions for Fire Fighters		Use goggles in combination with dust mask, and another protections as appropriate to situation.
Sec	tion 6 - ACCIDENTAL RELE Personal Precautions, Protective Equipment and Emergency Procedures	ASE MEASURES	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 materialwash 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.
Sec	tion 7 – HANDLING AND ST Handling	ORAGE 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.
		J.	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)	
Methyl ethyl ketone	200ppm	200ppm(590mg/m3)	TWA 200 ppm, STEL 300 ppm
Methanol	200ppm	200ppm(260mg/m3)(skin)	TWA 200 ppm, STEL 250 ppm (Skin)
Ethanol	Not listed	Not listed	TWA -, STEL 1000 ppm

2-Propoxyethanol	Not listed	Not listed		Not listed
Isopropyl alcohol	200ppm	【 Maximum a concentratio (980mg/m3)		TWA 200 ppm, STEL 400 pp
	Concentration standard	ds specified b	v the Ministe	r of Health, Labour and Welfa
	Concentration standard	is specified b	y the winniste	i of fleatth, Labour and Wenz
	Concentration standard 8-hours exposure	d value for	Concentration term exposu	on standard value for short- ire/ceiling
Methyl ethyl ketone	Not listed		Not listed	
Methanol	Not listed		Not listed	
Ethanol	Not listed		Not listed	
2-Propoxyethanol	Not listed		Not listed	
Isopropyl alcohol	Not listed		Not listed	
Engineering Controls		Use local exi fume or mist		tion in case of production of
			-	ng this material should be h facility and a safety shower
		Use explosio from static		trical equipment and prevent
Personal Protective Equipment	Respiratory Protection			ate respiratory protective assessments and other
	Hand Protection	Wear appropriate protective equipment, including impervious or impermeable safety gloves, as circumstances dictate.		
		Select and wear appropriate safety gloves based on 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		nd impermea	ive equipment such as ble protective clothing and es dictate.
				ate protective clothing and ssessments and other
ion 9 – PHYSICAL AND CH	EMICAL PROPERTIES			
Physical State		Liquid		
Form		Liquid		
Colour		Clear		
Odour Malting Daint /Examing		Solvent odor		
Melting Point/Freezing Point		No data avai	ladie	
Boiling Point or Initial Boiling Point and Boiling Ranges		80∼150 °C		
Flammability Lower and Upper Explosion Limit / Flammability Limit	Lower Limit	No data avai 1.7vol%	lable	
Flash Point	Upper Limit	11.4vol% −4°C (Tag (Closed Cup)	
Auto-Ignition Temperature		404°C		
Decomposition Temperature		No data avai	lable	
рН		No data avai	lable	
Kinematic Viscosity		No data avai	lable	
			lable	

	Partition Coefficient : n- Octanol/Water		No data available
	Vapour Pressure Density and/or Relative Density		9.493kPa (20°C) 0.86
	Relative Gas Density Particle Characteristics		No data available No data available
	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 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 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 2-Propoxyethanol Boiling Point or Initial Boiling Point and Boiling Ranges		150°C(743mmHg)
	Density and/or Relative Density		0.9141(15°C, 15°C)
	as Isopropyl alcohol Boiling Point or Initial Boiling Point and Boiling Ranges		82.4°C
	Density and/or Relative Density		0.7863(20°C, 20°C)
Se	ection 10 - STABILITY AND RI Reactivity Chemical Stability Possibility of Hazardous	EACTIVITY	Does not react dangerously under nomal conditions. Stable under normal conditions of use. Flammable
	Reaction Conditions to Avoid Incompatible Substances or		There is a risk of explosion due to impacts, friction, flame and o source of ignition. No data available
	Mixtures Hazardous Decomposition		No data available
	Products Other Data		No data available
Se	ection 11 - TOXICOLOGICAL I Acute Toxicity	INFORMATION Oral Dermal Inhalation	Unable to classify due to insufficient data. Unable to classify due to insufficient data. (gas) Does not fall under gas based on GHS definitions.
			(vapour) Classified as Category 3 since ATE is 500 to

other

Skin Corrosion/Irritation	(dust and mist) Unable to classify due to insufficient data. Classified as Category 2 since the sum of Category 2
	ingredients is more than 10%.
Serious Eye Damage/Eye Irritation	Classified as Category 2A since the sum of Eye Category 2 ingredients is more than 10%.
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	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)
	Unable to classify due to insufficient data.
Specific Target Organ	Classified as Category 1(blood) since one of the
Toxicity (Single Exposure)	Category 1(blood) ingredients is more than 10%.
	Classified as Category 1(visual organ) since one of the Category 1(visual organ) 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%.
	Classified as Category 1(central nervous system) since one of the Category 1(central nervous system) ingredients is more than 10%.
	Classified as Category 2(kidney) since one of the Category 2(kidney) ingredients is more than 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 Toxicity (Repeated Exposure)	Classified as Category 1(liver) since one of the Category 1(liver) ingredients is more than 10%.
	Classified as Category 1(visual organ) since one of the Category 1(visual organ) 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%.
	Classified as Category 1(peripheral nervous system) since one of the Category 1(peripheral nervous system) ingredients is more than 10%.
	Classified as Category 2(blood) since one of the Category 2(blood) ingredients is more than 10%.
	Classified as Category 2(nervous system) since one of the Category 2(nervous system) ingredients is more than 10%.
Aspiration Hazard	Classified as Classification not possible since the kinematic viscosity is unknown.

Section 12 - ECOLOGICAL INFORMATION

	Hazardous to the Aquatic Environment, Short-Term (Acute)		Classification not possible since lots of the concentrations of unknown ingredients.
	Hazardous to the Aquatic Environment, Long-Term (Chronic)		Classification not possible since lots of the concentrations of unknown ingredients.
	Ecotoxicity		No data available
	Persistence		No data available
	Bioaccumulative Potential		No data available
	Mobility in Soil		No data available
	Hazardous to the Ozone		Unable to classify due to insufficient data.
	Layer		
Sec	tion 13 – DISPOSAL CONSI	DERATIONS 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.
~		DMATION	
Sec	tion 14 - TRANSPORT INFO International Regulations		Conform to the provisions of IMO.
		UN No.	1210
			PRINTING INK RELATED MATERIAL
		Class	3
		Packing Group	Π
		Marine Pollutant	Not applicable
		Liquid Substance	Not applicable
		Transported in Bulk	
		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	Π
	Regulations in Japan		Complies with the Fire Service Act.
		by Road or Rail	
			Conform to the provisions of the Ship Safety Law.
		by Sea	

UN No 1210 Proper Shipping Name PRINTING INK RELATED MATERIAL Class 3 Π Packing Group Marine Pollutant Not applicable Liquid Substance Not applicable Transported in Bulk According to MARPOL 73/78, Annex II, the IBC Code Regulatory Information Conform to the provisions of the Civil Aeronautics Law. by Air UN No. 1210 Proper Shipping Name PRINTING INK RELATED MATERIAL Class 3 Packing Group Π **Emergency Response Guide** 130 Number Section 15 - REGULATORY INFORMATION Industrial Safety and Health Ordinance on the Prevention of Organic Solvent Poisoning Paragraph 1 Article 1 part 4 (Second-class organic solvents, etc.), Enforcement Act 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) Ethanol(Number: 61) (Trade Secrets) Propyl alcohol (Number: 494) (Trade Secrets) Methanol(Number: 560) (Trade Secrets) Methyl ethyl ketone (Number: 570) (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., 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) Methanol Methyl ethyl ketone 2-Propoxyethanol Dangerous goods and hazardous goods for which the name, etc. Substances subject to labeling and SDS issuance should be indicated (Article 57, Paragraph 1 of the Act, Article 18, Item 2 $\widetilde{}$ Item 3 of the Enforcement Order, Appended Table 2 of based on the Industrial Safety and Health Act Article 30 of the Safety and Health Regulations) (scheduled to come into effect on April 1, Reiwa 7) 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) 2-Propoxyethanol(Number: 268) (Trade Secrets) Poisonous and Deleterious Not applicable 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		Not applicable
Act on the Regulation of Manufacture and Evaluation of Chemical Substances		Priority Assessment Chemical Substances(Article 2 part 5)
Fire Service Act Narcotics and Psychotropics Control Act Foreign Exchange and Foreign Trade Act		Hazardous Materials Category IV inflammable liquids Class I petroleums non water-soluble Packing Group II raw materials for Narcotics or Psychotropics(Appended Table IV part 9, Order Article 4) Import Trade Control Order Appended Table I part 16 Import Trade Control Order Appended Table II (Import Approval)
Ship Safety Law Aviation Law		Flammable liquids(Order Article 3,Appended Table I) Flammable liquids(Order Article 194,Appended Table I)
Section 16 - OTHER INFORMAT	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	2-butanone and methyl ethyl ketone, MEK and ethyl methyl ketone are the same substances. Isopropyl alcohol belongs to propyl alcohol. We have a Priority Assessment Chemical Substance posting threshold of 0.1% or more.
	Foreign Exchange and	The posting of a Priority Assessment Chemical Substance in SDS is as of November 2019 as an effort. In law, printing inks are not approved for export
	Foreign Trade Act Fire Service Act Poisonous and Deleterious Substances Control Act	The flash point of Class I petroleums is less than 21 $^\circ$ 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
		3) Site for Safe Workplace by Ministry of Health, Labour and Welfare, Japan

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4) EZSDS (JCDB)

about This Product:

Additional Information 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.