MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Name of the product	Solvent ink fluid in cartridge, HS ink SPC-0477K
Type	Solvent type pigment ink fluid K
Manufacturer's Name / Supplier Address	Mimaki Engineering Co., Ltd. 1333-3 Kazawa Oaza Tomishi, Nagano 389-0514 Japan
Phone Number / Fax	81-268-64-2413 / 81-268-62-3996
Contact Person	Masaru ohnishi (Inks & Media Dept.)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Specific chemical identity Mixture Poisonous and Deleterious Substances Control Law: Not applicable

Hazardous components

Chemical or common name	CAS NO.	EINECSS NO.	Concentration (wt%)
Cyclohexanone	108-94-1	203-631-1	5.0 to 0.1
Carbon black	133-864	-	10.0 to 1.0

EU classification

Chemical or common name	Classification	Indication
Cyclohexanone	R10 • Xn;R20	[Xi] • R : 10-20 • S(2-)25

3. HAZARDS IDENTIFICATION

Classified name	Flammable liquid, acute toxic substance
Hazard comments	Stagnant vapor may cause fire. May cause organic solvent poisoning. Do not inhale. Inhalation may cause any of the following symptoms: Dizziness, headache Slight anesthesia Irritation to eyes, skin or respiratory tract

4. FIRST AID MEASURES

Eye	Flush eyes with plenty of water for at least 15 minutes. Consult a doctor immediately.
Skin contact	Immediately remove from skin with cloth. Flush thoroughly with plenty of water and soap or skin detergent. Do not use solvent or thinner. Consult a doctor in case of change of appearance or ache.
Inhalation	If inhaled, immediately remove to fresh air and keep warm and calm. If breathing irregularly or not breathing, give artificial respiration. Keep

	from swallowing vomit. Consult a doctor immediately. If inhaled and feeling sick, remove to fresh air, keep warm and calm and consult a doctor.
Swallowing	If swallowed, keep calm and consult a doctor immediately. Keep from swallowing vomit.

5. FIRE FIGHTING MEASURES

Extinguishers	CO_2, foam, powder, dry sand
Method	Use proper protection (heat-resisting clothes, etc.). Promptly remove flammables. Never splash water.

6. ACCIDENTAL RELEASE MEASURES

	Use proper protection (gloves, masks, aprons, goggles, etc.) Collect spills in a sealing container and remove to safe place. Dispose of waste according to legal instructions. Promptly remove ignitable, hot, or flammable items. Prepare proper fire extinguishers for accidental ignition. Use plastic or other equipment to prevent sparks during recovery operation. Use dry sand, dirt or other nonflammable absorber. Avoid discharge to rivers and environmental effects.

7. HANDLING AND STORING

Handling precautions	Handle in well-ventilated area. Prohibit use of fire, sparks or heat source. Ground equipment against electrostatics and use explosion-proof electric equipment. Use spark-proof tools. Keep used cloths, waste paints or spray dusts in water until disposal. Use proper protection (gloves, masks, aprons, goggles, etc.) Use local exhaust system and proper protection if working in closed area.
Storing precautions	Keep from sunlight. Store in well-ventilated area. Keep from open fire or heat source.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Equipment	Use explosion-proof handling equipment. Use exhaust system to prevent vapor build-up Ground transporting, scooping, agitating or other liquid handling equipment. Keep heat or fire sources from handling area. If working indoors, use automatic coating machine or other proper equipment to protect workers from direct exposure or use local exhaust

system to protect workers from exposure.

Protective gear	Eyes:	Wear eye shields.
	Skin:	Wear gloves that resist organic solvents and chemicals.
	Inhalation:	Wear gas masks for organic gases. Wear ventilation masks when working in closed area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Condition (at 25C)	Liquid
Color	K Color
Odor	Solvent odor
Boiling point	120°C or higher
Vapor pressure Pa (°C)	-
apor density (at 20°C)	0.975±0.100
pH	-
Flash point	62.0°C or higher
Ignition point	165°C or higher
Flammable point	-
Others	None

10. STABILITY AND REACTIVITY

Material of contact hazard	None
Harmful gas from combustion	CO, low-molecular monomer or other harmful gases may occur.
Other information on reactivity	No hazardous reactivity under standard conditions
Other information on hazards	None

11. TOXICOLOGICAL INFORMATION

[Hazard and exposure condensation criteria]

Material	Control condensation	AGGIH (TLV)	LARC class	Other hazard LD50 (oral)
Cyclohexanone	25ppm	25ppm	3	rat:1535µl/kg
Carbon black	2.9mg/m^3	3.5mg/m^3	2B	-

[Other hazard information on components]

None

[Other hazard information on product]

Safety tests on products have not been made but abuse may cause liver and kidney trouble and skin dryness.

12. BIOLOGICAL INFORMATION

Take cautions against environmental hazards from release or disposal.

13. DISPOSAL CONSIDERATIONS

Have waste liquids, containers and other materials disposed of by licensed industrial waste contractors.
Keep waste liquids from flushing containers, machines or other equipment from flowing directly to the ground or drainage.

Dispose of wastes from drainage, combustion, etc, in compliance with laws and regulations on waste disposal or cleaning, or have them disposed of by contractors.
To avoid harmful gases, do not use incinerators without flushing systems to burn wastes and other materials.

14. TRANSPORT INFORMATION

Common	Follow handling and storing precautions.
Land transport	Follow legal requirements on transportation.
Marine transport	Follow the Ship's Safety Law.
Air transport	Follow the Aviation Law.
UN Number	Not applicable

15. REGULATORY INFORMATION

EU Symbol:	F Flammable, Xi Irritant, Xn Harmful
Risk Phrases:	R10 Flammable.
	R20/R21 Harmful if inhaled or swallowed.
	R36 Irritating to eyes.

16. OTHER INFORMATION

This MSDS is a concise assortment of information necessary for proper use of the Mimaki products. The MSDS reflects the latest documents, information and data available at the time of publication. However, assessment on risks and hazards may not be complete and extra precaution on use is highly recommendable. The MSDS is subject to change without notice due to revision of laws and/or new knowledge.