SAFETY DATA SHEET

Product name	:	Heatless ink IQ799	Date Prepared	:	Aug.04.2015
SDS Number	:	15A057	Revision Date	:	

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	:	Heatless ink IQ799
Recommended use	:	Ink for ink jet printer
Company	:	GENERAL CO., LTD.
		18, Satsukigaoka, Minakuchi-cho, Koka-shi, Siga 528-0062, Japan
Telephone number	:	+81-748-65-2260
Fax number	:	+81-748-63-1922
E-mail	:	qa_1@general.co.jp
Emergency telephone number	:	+81-748-65-2260

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Flammable liquid	:	Category 2
Serious eye damage/eye irritation	:	Category 1
Specific target organ toxicity - Single exposure	:	Category 3 (Narcotic effect)

Label Elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
Highly flammable liquid and vapor.
Causes serious eye damage.
May cause drowsiness or dizziness.

Precautionary statements

Prevention :
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response :
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use an appropriate extinguishing agent for extinction.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER of doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

Storage : Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Store locked up.

Disposal : Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards : None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance or Mixture : Mixture

Ingredients

Components	CAS No.	Concentration (wt%)
Dyestuff	Confidential	< 10
Ethanol	64-17-5	< 65
1-Propanol	71-23-8	< 25
Acetone	67-64-1	< 5
1-Butanol	71-36-3	< 3

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention if you feel unwell.

Skin contact : Wash thoroughly with soap and plenty of water while removing all contaminated clothes.

If skin irritation or rash occurs: Get medical advice/attention.

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to remove. Continue to rinse for at least 15 minutes.

Get medical attention immediately.

Ingestion : Wash mouth with water and seek medical advice immediately.

Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

: No further relevant information available.

Recommendations for immediate medical care and special treatment needed

Notes to physician : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO_2), Dry chemical, Alcohol-resistant foam, Water spray.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the substance or mixture

: Carbon oxides, nitrogen oxides will form in fire.

Special protective equipment for firefighters

: Wear suitable protective suit and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Wear appropriate personal protective equipment as specified in section 8. Keep unnecessary peoples away. Isolate area. Ensure adequate ventilation.

Environmental precautions : Do not release into soil, sewers, river, or the public water courses.

Methods and materials for containment and cleaning up

: In the case of a cartridge: Not applicable.

At the time of the leakage of contents: Absorb or cover with dry earth, sand or other non-combustible material and transfer to sealable containers. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling

Handling : Put on appropriate personal protective equipment (see Section 8).
Prohibition of dropping and throwing.
Avoid contact with skin, eyes and clothing.
Do not breathe vapors. Use only in a well-ventilated area.
Use a ventilation, local exhaust if vapor or aerosol will be generated.
Keep away from fire, sparks and heated surfaces.
Take precautionary measures against electrostatic discharges.

Hygiene measures : When using do not eat or drink. Wash hands thoroughly after handling.

Storage : Do not store ink in high or freezing temperature.
Keep away from heat and direct sunlight.
Do not store ink with acids, oxidizing agents or explosives.
Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Components	CAS No.	OSHA PEL	ACGIH TLV
Ethanol	64-17-5	1000 ppm, 1900 mg/m3	STEL: 1000 ppm
1-Propanol	71-23-8	200 ppm, 500 mg/m3	TWA: 100 ppm
Acetone	67-64-1	1000 ppm, 2400 mg/m3	TWA: 500 ppm STEL: 750 ppm
1-Butanol	71-36-3	100 ppm, 300 mg/m3	TWA: 20 ppm

Engineering controls

Engineering measures : Adequate ventilation should be provided so that exposure limits are not exceeded.
Take precautionary measures against static discharge.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection : Impermeable gloves.

Eye protection : Safety glasses with side-shields. Goggles.

Skin and body protection : Protective suit, Safety shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	Solvent type ink
Color	:	Blue
Odor	:	Alcohol odor
pH	:	6.5 - 8.5
Melting point	:	No data available
Boiling point	:	75 degree C
Flash point	:	12.0 degree C (Closed cup)
Evaporation rate	:	No data available

Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Vapor density	:	No data available
Relative density	:	0.84 (at 25 degree C)
Water solubility	:	Insolubility
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available

10. STABILITY AND REACTIVITY

Reactivity	:	No hazardous reactions with proper storage and handling.
Chemical stability	:	The product is stable under normal conditions.
Possibility of hazardous reactions	:	No hazardous reactions with proper storage and handling.
Conditions to avoid	:	High temperature, heat, sparks, flames and other sources of ignition. Oxidizing condition.
Incompatible materials	:	Acid and strong oxidizer can cause a reaction.
Hazardous decomposition products	:	Carbon oxides, nitrogen oxides will form in fire.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute toxicity (oral)	:	Ethanol	LD50 (rat)	7,060 mg/kg
		1-Propanol	LD50 (rat)	3,830 mg/kg
		1-Butanol	LD50 (rat)	1,227 mg/kg (calculation value)
Acute toxicity (dermal)	:	Ethanol	LDLo (rabbit)	20,000 mg/kg
		1-Propanol	LD50 (rabbit)	>10,000 mg/kg
Acute toxicity (inhalation)	:	Ethanol	LC50 (rat)	63,000 ppm/4h
		1-Propanol	LC50 (rat)	>9.8 mg/l/4h
Skin corrosion/irritation	:	1-Propanol	(rabbit)	72h; Slight
		1-Butanol	(rabbit)	405 mg/24h; Moderate
Serious eye damage/eye irritation	:	1-Propanol	(rabbit)	72h; Severe
		1-Butanol	(rabbit)	1.62 mg; Severe
Respiratory or skin sensitization	:	1-Propanol	(guinea pig)	Non-sensitizing

Germ cell mutagenicity	:	No data available
Carcinogenicity	:	NTP : Not listed. IARC : Ethanol: Group 1 EPA : 1-Butanol: D
Reproductive toxicity	:	No data available
Specific target organ systemic toxicity - Single exposure	:	May cause drowsiness or dizziness.
Specific target organ systemic toxicity - Repeated exposure	:	No data available
Aspiration hazard	:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish	:	Ethanol	LC50 (Pimephales promelas)	>100 mg/l/96h
		1-Propanol	LC50 (Pimephales promelas)	>804 mg/l/96h
Persistence and degradability	:	No data available		
Bioaccumulation	:	No data available		
Mobility in soil	:	No data available		

13. DISPOSAL CONSIDERATIONS

Appropriate disposal methods	:	Dispose of waste material in accordance with local, state and federal pollution regulations.
Contaminated packaging	:	When disposing of an empty container, dispose after removing contents materials completely. Dispose of this material and its container according to your country law.

14. TRANSPORT INFORMATION

Class	:	Class 3
UN number	:	1210
Packing group	:	Ⅱ
UN proper shipping name	:	Printing Ink

Sea transport

IMDG-Code:

Class	:	Class 3
UN number	:	1210
Packing group	:	Ⅱ
UN proper shipping name	:	Printing Ink
Marine pollutant	:	No

Air transport

ICAO-TI/IATA-DGR :

Class	:	Class 3
UN number	:	1210
Packing group	:	Ⅱ
UN proper shipping name	:	Printing Ink

Land transport

DOT :

Class	:	Class 3
UN number	:	1210
Packing group	:	Ⅱ
UN proper shipping name	:	Printing Ink

15. REGULATORY INFORMATION

Follow all regulations in your country.

Toxic Substances Control Act (TSCA)

TSCA Status	:	All of the components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

Literature Reference : SDS of raw material manufacturer
NITE: Chemical Risk Information Platform
3E: Ariel Research Tool

Revision date :

Further information

The information contained herein is based on the current knowledge. This Safety Data Sheet is intended to describe our products in correctness of safety requirements. It should not therefore be construed as guaranteeing specific properties. The data applies to only usual handing.