SAFETY DATA SHEET

24-Oct-2012 DATE: **REVISION:** 30-Oct-2018

1. PRODUCT INFORMATION

Product Name: ZIG Memory System MILLENNIUM, MILLENIUM Assortment Set

Product Number: MS-005, MS-01, MS-03, MS-05, MS-08, MS/5V

Recommend Application: Ink

KURETAKE CO., LTD. Company Information: Company Name:

Address: 576 Minamikyobate-cho, 7-chome, Nara-shi, 630-8670

Division: Laboratory

Tel: +81. 742. 50. 2055 +81. 742. 50. 2055 Emergency Tel: +81. 742. 50. 2077 Fax: F-mail· kuretake@kuretake.co.jp

2. HAZARDS IDENTIFICATION

GHS Classification

Physical hazards Flammable liquid Not Classification Health hazards

Not Classification Acute toxicity Not Classification Acute toxicity (Endermic) Acute toxicity (Inhale: Gas) Not Classification

Acute toxicity (Inhale : Dust, Mist) Not Classification Skin corrosion / irritative Category 2 Serious eye damage / eye irritation Category 2 Sensitizing property of apparatus respiratorius Not Classification Skin sensitizing property Not Classification Generate cell mutagenicity Not Classification Carcinogen Category 2 Reproductive effect Category 2

Specially Target Organ Single exposure Category 1 (Central nervous system,

blood-forming organ, Kidney) / Systematic Toxicity

Category 2 (Central nervous system,

Systemic toxicology)

010 Pure Black, 070 Pure Orange,

080 Pure Violet

Category 1 (Respiratory organ) Repeated exposure

010 Pure Black Only

Category 2 (blood-forming organ) 010 Pure Black, 070 Pure Orange,

080 Pure Violet

Category 2 (Respiratory organ, Liver)

070 Pure Orange Only

Not Classification Aspiration hazard **Environmental hazards** Acute aquatic hazard Not Classification Not Classification Chronic aquatic hazard

Hazardous to the ozone layer Out of Division

Label element

Pictogram



Signal words Danger

Hazardous Information

Causes skin irritation
Causes serious eye irritation

Suspected of causing cancer

Suspected of damaging fertility or the unborn child

Causes damage to organs(Central nervous system, blood-forming organ, Kidney)

May cause damage to organs(Central nervous system, Systemic toxicology)

010 Pure Black, 070 Pure Orange, 080 Pere Violet

Causes damage to organs (Respiratory organ) 010 Pure Black Only

May cause damage to organs (blood-forming organ)010 Pure Black , 070 Pure Orange, 080 Pure

Violet (Respiratory organ, Liver) 070 Pure Orange Only

Instruction

[Measure for Safety]

Wear eye/face protection

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/vapours/spray.

Do not breathe dust/fume/gas/mist/vapours/spray.

[First Aid]

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do.

Continue rinsing. If eye irritation persists, get medical advice/attention. Wash hands after handling.

IF exposed: Call a POISON CENTER or doctor/physician. Specific treatment. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

Get medical attention/advice if you feel unwell.

Get medical attention/advice if you feel unwell.

[Storage]

Store locked up.

[Disposal]

For dispose the content and container, entrust to the special waste disposer authorized by the

governor of prefectural and city governments.

Country / Community Information: No data

3. COMPOSITION AND INGREDIENT INFORMATION

Single, Mixture: Mixture

Ingredient and content

Ingredient name	CAS No.	Concentration (wt%)
Organic Pigment	-	≦ 10
Carbon black (010 Pure black)	1333-86-4	≦ 10
Ethylene glycol	107-21-1	3.0 - 10
Isopropyl alcohol (010 Pure Black , 070 Pure Orange, 080 Pure Violet)	67-63-0	1.0-5.0
Diethylene glycol monobutyl ether (070 Pure Orange)	112-34-5	1.0-5.0
Water soluble Resin	-	< 10
Water	7732-18-5	60 - 70

4. FIRST AID

For Inhale: Remove the victim to the fresh air area. If feel bad, see a doctor.

For Skin: Put off the all polluted clothes immediately. Clean with the proper temp. and slow flowing water

for over 15 minutes. If have irritate the skin, see a doctor. Call a doctor if feel bad. Before re-use

the put off clothes, clean it up and remove the pollution.

For Eyes: Put off the contacts if possible, and continue to clean. Clean the eyes carefully for a few minutes. If the eyes get this product, clean the eye immediately and wash away completely. If the cleaning

the eyes get this product, clearline eye immediately and wash away completely. If the clearling

eyes not enough, it may cause irreversible eye damage.

If irritate to the eyes continue, see a doctor.

Call a doctor, if feel bad. Rinse the mouth out. Do not have the victim vomit.

For Swallow:

Expected acute symptom and late symptom:

Sialorrhea, face flash, cough, dizzy, lethargy, headache, sore throat, deliquim animi barf, vomition

Most important sign and symptom:

No data

Protect the person received first aid:

Rescuer must wear proper protective equipment according to the situation.

Special notandum for doctor:

Symptom will appear later, so that if the patient exposed excessively, it needs medical follow progress.

5. FIRE-FIGHTING MEASURE

Extinguishing Media: Small fire / Carbon dioxide, dry chemical extinguishing media, water spray, alcoholic resistance foam.

Great Conflagration: Water spray, mist water, alcoholic resistance form.

Forbidden Extinguishing Media:

Cylindrical pouring water.

Special Dangerous and Harmful Effect:

The irritative, toxicity and corrosive gas is generated by fire. The container will be burst by heating.

If it is not dangerous, move the container from the fire area.

If it is impossible to move, cool the container and around by spraying water. After extinguishing a

fire, cool the container completely by large quantity of water.

Protect the Person Extinguish a Fire:

For fighting fire, wear compressed air open-circuit SBCA and protect equipment for chemical.

Fight a fire from up wind.

6. ACCIDENTAL RELEASE MEASURES

Notandum for Human Body, Protective Equipment and Emergency Measure:

The worker must wear proper protector (refer to section 8) not to get the paint on the skin or into eyes. Do not touch the leakage material or walk into it. Keep the proper distance in all direction as the leakage area immediately. No unauthorized entry. If leakage but not occur a fire, wear the occlusive and impervious protect wear. Stay in the wind. Move away from the low ground.

Ventilate before enter the sealed area.

Notandum for Environment:

Prevent from influx into the drain ditch, sewer, basement and closed area.

Take notice not to affect the environment by discharge the paint into the river.

Collect Neutralization:

In small quantity case, absorb the leakage material by dry sand and nonflammable material or collect it in the sealed type container then dispose it. In small quantity case, collect the absorbed material by clean antistatic tools. In large quantity case, yard the leakage material by mound to prevent flow out and lead it into safety area then collect it. In large quantity case, water spray lower the steam temperature but it may not inhibit combustion at the sealed area.

Containment or Depurant and Equipment:

If it is not danger, stop the leakage. Ground all equipment which need for handle the leakage

material. Use steam retard foam for lower the steam concentration.

Precaution of Second Disaster:

Clear away all ignition source immediately (Do not smoking near around, forbid firework and flame) In case large steam generating, retard it by mist spray. Call related agency and ask the help.

7. HANDLING AND STORAGE

Handling Do the equipment measure described on the section 8 and wear protector.

Local exhaust ventilation, whole ventilation:

Do the local exhaust ventilation and whole ventilation described on section 8. Prevent leakage the liquid and steam as possible.

Safe handling notandum:

This product irritate the eyes so that care not to get it into the eyes. This product may cause sleep or vertigo, irritate the apparatus respiratorius and damage organ parts so that do not touch, inhale and swallow it. Do not fall, drop, shock or drag the container. Clean hands well after use this product. Use this product outside or well ventilated area only. Avoid touching, refer to the section 10.

Keep away from high temperature materials spark and fire, and avoid touching oxidizer and organic peroxide.

Keep the container airtight and stock it in well ventilated place. Stock in the fulfilled and ventilated Storage

> and cool place. Keep away from oxidant. Keep away from direct sunlight and fire. The inventory location must be fire-proof construction and the floor must be impermeable to prevent permeate

the basement and spill to outside. Lock up the container.

Dangerous goods if mixed:

Refer to the section 10.

Container material:

Use the container regulated by fire law and UN transportation law.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Install the eyewashing devices and safety shower where handle or stock this product.

Protection Equipment

For apparatus respiratorius:

Wear proper respiratory protect equipment such as gas mask for organic gas (if high

concentration, wear air-supplied respirator).

For hands: Wear the gloves designated by manufacturer. For eyes: Wear the eye protector designated by manufacturer.

For skin and Body: Wear protect boots, oil resistant apron (impermeable and antistatic) and protect clothes (antistatic)

designated by manufacturer.

Hygiene Measure

Check the protect equipments regularly with check sheet. Clean hands well after use this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties Condition (20°C) liquid

Odorless Odor **Boiling point** Approx. 100°C Vapor pressure No data Specific gravity (20°C) 1.07 - 1.13 No data pH (against water base) Other No data Flash point >100°C Ignition point No data

Explosion limit No data Other Hazardous Information No data

10. STABILITY AND REACTIVITY

Hazardous Information

Stability: Under usually storage condition, it is stable.

Hazardous Reactivity: Nothing **Avoid Condition** Nothing Nothing **Avoid Touching** Hazardous Decomposition Product:

Generates harmful gas such as carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Harmful ingredient and exposure limit.

Name	ACGIH (TLV)	IARC	OTHER
Ethylene glycol	Max 100 mg/m3	-	LD50(oral, rat) > 10,000g/kg
Carbon black	3.5 mg/m3	2B	LD50(oral, rat) LD50 4000-13400mg/kg
Isopropyl alcohol	400 ppm	-	LD50(oral, rat) 4,384 mg/kg
Diethylene glycol monobutyl ether	-	-	LD50(oral, rat) 5,660 mg/kg

Other harmful information relevant to composition: No data Harmful information for product: No data

12. ECOLOGICAL INFORMATION

Acute Hazardous Aquatic Environment: No data Inveteracy Hazardous Aquatic Environment: No data

13. DISPOSAL CONSIDERATIONS

Residue Waste: For dispose, follow the related regulation and standard of local governments. Ask the licensed

industrial waste disposal company or local governments.

For Burning: Spray the incinerator with waste liquid directly or mix with flammable solvent in small quantity to burn.

Activated sludge process.

Polluted container and package:

Clean the container and recycle or treat it in accordance with the related regulation or local

governments. If dispose the container, remove the content completely.

14. TRANSPORT INFORMATION

Common: Please follow the section7. Check if there are no leakage from container and take cargo without

falling, dropping and damage.

Land Transportation: In case of fall under the Fire Law, Industrial Safety and Health Law, Poisonous Material Control

Law follow each relevant mode of transportation.

Marine Transportation: Please follow the Law for Safety of Vessel.

Air Transportation: Please follow the Aviation Law and regulation of ICAO.

UN No. N/A Packing group N/A

15. REGULATORY INFORMATION

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. OTHER INFORMATION

Main cited item

JPMA "Data Base for raw material MSDS"

JPMA "MSDS Guide Book [Mixture (for paint)]" 4th version

JPMA "MSDS Guide Book [Mixture (for paint)]" 4th version-addenda version

Solvent pocket book

Raw material manufacturer SDS

Regarding to the description content:

The description content of this data sheet is based on the documentation, information and data that we can garner at the present moment so that it might be change depend on new information. And it is recommend for usual handling so that in case of special handling, use it before take safety measure that suitable for your application and usage.

The description content is information service and not certification.

N/A = Not Applicable