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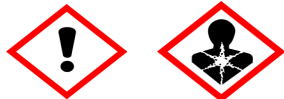
SAFETY DATA SHEETDATE: 23-Jan-2009
REVISION: 14-Apr-2017**1. PRODUCT INFORMATION**

Product Name:	Product Number:
ZIG MEMORY SYSTEM Calligraphy	#MS-3400
ZIG MEMORY SYSTEM Journal & Title	#MS-3600
ZIG MEMORY SYSTEM Scroll & Brush	#MS-5000
ZIG MEMORY SYSTEM Vellum Writer	#MS-6300
ZIG MEMORY SYSTEM Writer	#MS-6600
ZIG MEMORY SYSTEM Fine & Chisel	#MS-6700
ZIG MEMORY SYSTEM Brushables	#MS-7700

Recommend Application: Marker (as ink)

Company Information:	Company Name:	KURETAKE CO., LTD.
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2. HAZARDS IDENTIFICATION

GHS Classification		
Physical hazards	Flammable liquid	Not Classification
Health hazards	Acute toxicity	Out of Division
	Acute toxicity (Oral)	Out of Division
	Acute toxicity (Endermic)	Out of Division
	Acute toxicity (Inhale : Gas)	Not Applicable
	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	Category 1
	Generate cell mutagenicity	Out of Division
	Carcinogen	Out of Division
	Reproductive effect	Not Applicable
Specially Target Organ	Single exposure	Category 1 (Central nervous system, Kidney, Blood system)
/ Systematic Toxicity	Repeated exposure	Not Applicable
	Attractant respiratory harmful effect	Not Classification
Environmental hazards	Acute aquatic toxicity	Not Classification
	Chronic aquatic toxicity	Not Classification
Label element		
Pictogram		
Signal words	Danger	
Hazardous Information		
	Causes serious eye irritation	
	May cause an allergic skin reaction	
	Causes skin irritation	
	Causes damage to organs (Central nervous system, Kidney, Blood system)	

Instruction**【Measure for Safety】**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear eye / face protection.
 Wear protective gloves.
 Avoid breathing dust / fume / gas / mist / vapours / spray.
 Contaminated work clothing should not be allowed out of the workplace.
 Do not eat, drink or smoke when using this product.
 Wash hands thoroughly after handling.
 Do not breathe dust / fume / gas / mist / vapours / spray.
 Use personal protective equipment as required.

【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 ON SKIN:

Wash with plenty of soap and water.
 If skin irritation or rash occurs, seek medical advice / attention.
 Wash contaminated clothing before reuse.

IF exposed:

Call a POISON CENTER or doctor / physician.

IF exposed or concerned:

Get medical attention / advice.

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: None known

3. COMPOSITION AND INGREDIENT INFORMATION

Single, Mixture: Mixture

Ingredient and content

Ingredient name	CAS No.	Concentration (wt%)
Ethylene glycol	107-21-1	≤ 10
Triethanolamine	102-71-6	0 - 2.0
Propan-2-ol	67-63-0	0 - 2.0
Ammonium hydroxide	1336-21-6	0 - 0.4
Glycerol	56-81-5	15 - 20
Pigment		
- Carbon black	1333-86-4	non-disclosure
- Other pigments	non-disclosure	non-disclosure
Water	7732-18-5	60 - 70
	Amount	100

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 eyes not enough, it may cause irreversible eye damage.
 If irritate to the eyes continue, see a doctor.

For Swallow:

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

Expected acute symptom and late symptom:

Sialorrhoea, 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 section10.

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

Storage

Keep the container airtight and stock it in well ventilated place. Stock in the fulfilled and ventilated 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 eye washing 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 equipment regularly with check sheet. Clean hands well after use this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties	Condition (20°C)	Colored liquid
	Odor	None
	Boiling point	No data
	Vapor pressure	No data
	Specific gravity (20°C)	No data
	pH (against water base)	6.0 - 10.5
	Other	None known
Hazardous Information	Flash point	No data
	Ignition point	No data
	Explosion limit	No data
Other Hazardous Information		None known

10. STABILITY AND REACTIVITY

Stability: Under usually storage condition, it is stable.

Hazardous Reactivity: Nothing

Avoid Condition: Nothing

Avoid Touching: Nothing

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 100mg/m ³ (as aerosol)	No data	LD50(oral, rat) 4000-10200mg/kg
Triethanolamine	No data	3	LD50(oral, rat) 7269.3mg/kg
Propan-2-ol	200ppm	3	LD50(oral, rat) 3437mg/kg
Ammonium hydroxide	25ppm (as NH ₃)	No data	LD50(oral, rat) 350mg/kg
Glycerol	No data	No data	No data
Carbon black	3mg/m ³	2B	LD50(oral, rat) 15400mg/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 section 7. 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

15. REGULATORY INFORMATION

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility. Outline of Hazardous Material Regulation in Japan.

Industrial Safety and Health Law:	Notice object goods (Article 57, section 2, Enforcement regulation 18-21, appendix 9.) (Ethylene glycol, Triethanolamine, Propan-2-ol, Ammonium hydroxide, Carbon black)
Fire Law:	N/A
Law for Safety of Vessel	N/A
Aviation Law:	N/A

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