

Safety Data Sheet

Date of issue: 2013-03-01
Revision Date: -

1. Identification of the mixture and of the company

Product name : Ink for BE- α DX5(Black)
Ink for BE- α DX7(Black)

Company : ZEBRA CO., LTD.
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This phone number is available only during office hours: 9 a.m. to half past 5 p.m.
(Japan time)

Product use : Infill Ink for writing implement

2. Hazards identification

GHS classification

Physical hazards

Flammable liquids	Not classified
Pyrophoric liquids	Not classified
Self-heating mixtures	Not classified
Corrosive to metals	Not classified

Health hazards

Acute toxicity-Oral	Not classified
Acute toxicity-Dermal	Not classified
Acute toxicity-Inhalation: vapour	Classification not possible
Acute toxicity-Inhalation: mist	Classification not possible
Skin corrosion / irritation	Category 3
Serious eye damage / eye irritation	Category 2
Respiratory or skin sensitization	Classification not possible / Category 1
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive toxicity	Category 1B
Specific target organ toxicity (Single exposure)	Category 1 (respiratory organs, nerve center, heart, kidney) Category 3 (respiratory tract irritation)
Specific target organ toxicity (Repeated exposure)	Category 1 (respiratory organs, nerve center, heart)
Aspiration hazard	Classification not possible

Environmental hazards

Hazardous to the aquatic environment (acute)	Not classified
Hazardous to the aquatic environment (chronic)	Not classified

GHS label elements

Pictograms or Symbol

Exclamation mark

Health Hazard



Signal Word

Danger

Hazard statement

- Causes mild skin irritation
- May cause an allergic skin reaction
- Causes serious eye irritation
- May cause respiratory irritation
- May damage fertility or the unborn child
- Causes damage to organs (respiratory organs, nerve center, heart, kidney)
- Causes damage to organs(respiratory organs, nerve center, heart) through prolonged or repeated exposure

Precautionary Statements**Prevention**

- Read label and Material Safety Data Sheet before use.
- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Do not breathe dust/vapours
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves/eye protection.
- Wash hand thoroughly after handling
- Avoid release to the environment

Response

- IF exposed or concerned: Get medical advice/attention
- IF ON SKIN: Wash with soap and water
- If skin irritation or a rash occurs: Get medical advice/attention
- IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do . Continue rinsing
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Wash contaminated clothing before reuse

Storage

- Store in a well ventilated place. Keep cool and container tightly closed.

Disposal

- Dispose of contents/container to in accordance with local government regulation.

3. Composition/information on ingredients**Mixture****Component and Amount**

Component	Amount	CAS No.	Reference Number in Gazetted List in Japan (Japanese Chemical Substances Control Act)
Dyes	5-10%	Nondisclosure	Nondisclosure(registered)
Ethylene glycol	20-25%	107-21-1	(2)-230
Glycerol	5-10%	56-81-5	(2)-242
Water	55-60%	7732-18-5	—
Triethanolamine	0-1%	102-71-6	(2)-308
Additives	0-1%	Nondisclosure	Nondisclosure(registered)

4. First-aid measures

After inhalation:

Call a doctor/physician if you feel unwell.

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

After skin contact:

Wash with soap and water

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

Wash contaminated clothing before reuse

After eye contact:

If in eyes: Rinse continuously with water for several minutes.

Remove contact lenses if present and easy to do – continue rinsing

If eye irritation persists: Get medical advice/attention

After ingestion:

Call a doctor/physician if you feel unwell.

Protection of the person who takes first aid

Nothing in particular.

5. Fire-fighting measures

Suitable Extinguishing media

Carbon dioxide, dry chemical powder, water fog, foam

Prohibition extinguishing media for safety reason

Water spray (straight)

Specific hazards

This product is not combustible. But evaporated residue is combustible.

May produce toxic fumes if burning.

Specific fire fighting procedures

If safe to do so, move undamaged containers from the fire area.

If can't move the container, cool containers and surrounding with spray water.

Cool containers with large quantities of water until well after extinguished the fire.

Special protective equipment for fire-fighters

Fire-fighting should be performed from the windward side.

Respiratory protection, and other suitable protective equipment

6. Accidental release measures

Personal precautions

The pollution area should be established as off limits without concerned persons.

Protective equipment and emergency measure

Do not touch the leakage or its damaged container without suitable protection.

Do not walk through the leakage.

Keep sufficient ventilation if the area is indoor.

Remove ignition sources.

Environmental precautions

Keep away from drains, and prevent from releasing to the environment.

Methods for cleaning up

Use non-flammable absorbent materials, and put them in airtight container.

Dispose of absorbent in accordance with law.

Prevention of secondary disaster

Remove nearby ignition source and hot surface.

7. Handling and storage

Handling

Technical measures

Do suitable equipment measures and use suitable protection that refer to "8. Exposure control/ personal protection".

Local exhaust ventilation and general ventilation

Use local exhaust ventilation and general ventilation that refer to "8. Exposure control/ personal protection".

Caution

When handling do not use high temperature articles, spark and fire.

Handle container with care, do not make it turn over, drop, give impact and drag.

Do not breathe, contact and swallow.

Maintain air concentrations below exposure limit using exhaust ventilation.

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

Wash hand thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Avoid contact

Refer to section 10 about stability and reactivity.

Storage

Incompatible materials

Refer to section 10 about stability and reactivity.

Storage condition

Store away from heat/sparks/open flames – No smoking

Store in a well ventilated place. Keep cool and container tightly closed.

Store locked up.

The Containers

Use the container that our company filled up when ship products

8. Exposure control/ personal protection

Exposure limit values

Chemical name	Permissible concentration		Administrative levels
	The Japan Society for Occupational Health	ACGIH TLV-TWA	Ministry of Health, Labour and Welfare(JAPAN)
Glycerol	Not established	10mg/m ³ (mist, TWA, 2009)	Not established
Triethanolamine	Not established	5mg/m ³ (TWA, 2009)	Not established
Ethylene glycol	Not established	100mg/m ³ (aerosol, TLV-C(STEL), 2009)	Not established

Equipment measures

Put up local exhaust ventilation. Use explosion-proof electrical/ventilating/lighting.

Take precautionary measures against static discharge.

Put up emergency eyewash and shower in case of storage or handling about this product.

Protection

Respiratory protection

If necessary use suitable respiratory protection.

Hand protection

Use suitable protective gloves.

Eye protection

Use suitable eye protection.

Skin/body protection

If necessary use suitable face protection.

Hygiene measures

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

Wash thoroughly after handling.

9.Physical and chemical properties

Appearance	Black Liquid
Odour	Peculiar odour
pH	8.4-9.4
Melting point / Coagulating point	No data available
Boiling point	No data available
Flash point	No data available
Explosive limit UEL	No data available
Explosive limit LEL	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific gravity	No data available
Water solubility	This ink is soluble in water.
Partition coefficient n-octanol/water	No data available
Ignition point	No data available
Decomposition point	No data available

10. Stability and reactivity

Chemical stability	This product is stable in normal condition.
Materials to Avoid	No data available
Conditions to avoid	No data available
Incompatible materials	No data available
Hazardous decomposition products	No data available

11. Toxicological information

Acute toxicity-Oral	Not classified
Acute toxicity-Dermal	Not classified
Acute toxicity-Inhalation : vapour	Classification not possible
Acute toxicity-Inhalation : mist	Classification not possible
Skin corrosion / irritation	Category 3
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Aspiration hazard	Classification not possible

12. Ecological information

Hazardous to the aquatic environment(acute)	Not classified
Hazardous to the aquatic environment(chronic)	Not classified
Degradability	No data is available
Bioaccumulative potential	No data is available
Mobility in soil	No data is available

13. Disposal considerations**Waste residues**

Disposal must be made according to official regulations.
Avoid release to the environment.

Contaminated container and packaging

Do not flush into the sewer.
Remove all contents when you dispose of empty containers.

14. Transport information

The contents are as follows when transport only ink

International regulation**IMDG(maritime transport)**

UN No.	Not applicable
Class	-
Packing Group	-
Marine Pollutant	-

ICAO/IATA(air transport)

UN No.	Not applicable
Class	-
Packing Group	-

Special precautions

Prevent from falling, stumbling and doing damage when the container loading..

Avoid acute vibration and friction for container.

If there are some indications of hazard in transporting like acute leak in transporting,
take emergency measures and report the accident at once to disaster management agency.

Avoid transport with foods or feeds.

Above regulations are applied to transport of writing instruments filled with the ink.

15. Regulatory information(Japan)**Industrial Safety and Health Act****Article 57-2 paragraph (1) "notifiable substances"**

Applicable

Triethanolamine

Ethylene glycol

Order for Enforcement Article 1, 6, 9-3 Appended Table 1 item(IV)

dangerous substances ・inflammable substances

Not applicable

Poisonous and Deleterious Substances Control Law

Article 2 Appended Table 1 and 2

Not applicable

**Act on confirmation, etc. of Release Amounts of Specific Chemical Substances
in the Environment and Promotion of Improvements to the Management There of
Article 2 Class I , II Designated Chemical Substances**

Not applicable

Fire Service Law

Article 2 paragraph (7) hazardous material Appended Table 1

Not applicable

Ship Safety Act

**Regulations for the carriage and storage of dangerous goods in ship Article 2, 3
dangerous goods public notice Appended Table 1**

Not applicable

Civil Aviation Law

Ordinance for Enforcement Article 194 dangerous goods public notice Appended Table 1

Not applicable

16. Other information

In this sheet, the contents of ingredients and the value of physical and chemical properties are not guaranteed performance.

The information contained in this sheet is based on the data available at now.

But this shall not constitute a guarantee for any specific or classification.

Please be alert to handling this product because chemicals shall have unknown hazards.

This sheet may be revised when we get new information.

The information is assumed in the case of large-scale handling on business operations.

They cannot be always applicable to general use of writing instruments.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS) second revised edition 2007
Recommendation of Occupational Exposure Limits(2009-2010) by The Japan Society for Occupational Health
2009 TLVs and BEIs by ACGIH