1. Identification of the mixture and of the company

Product name : Ink for Ball point pen refills as follows:

K-0.7(Black, Blue, Red) : BR-6A-K-BK,BL,R
SK-0.7(Black, Blue, Red) : BR-6A-SK-BK,BL,R
SH-0.5(Black, Blue, Red) : BR-8A-SH-BK,BL,R
H-0.7(Black, Blue, Red) : BR-6A-H-BK,BL,R
LH-1.0(Black, Blue, Red) : RLH10-BK,BL,R
LH-1.2(Black, Blue, Red) : RLH12-BK,BL,R
LH-1.6(Black, Blue, Red) : RLH16-BK,BL,R
F-0.7(Black, Blue, Red) : BR-1B-F-BK,BL,R
F-1.0(Black, Blue, Red) : BRM-1B-F-BK,BL,R
4C-0.4(Black) : R4C4-BK
4C-0.5(Black) : R4CS-BK
4C-0.7(Black, Blue, Red) : BR-8A-4C-BK,BL,R
4C-1.0(Black, Blue, Red) : R4C10-BK,BL,R
ST-0.7(Black, Blue, Red) : BR-3B-ST-BK,BL,R

Ink for Lite Rite DE(Ball-point Pen Side:Black ink)

Company : ZEBRA CO., LTD.
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN
TEL: +81-3-3268-1193
FAX: +81-3-3268-1197
Emergency telephone : +81-3-3268-1193
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 Category 4
- Acute toxicity–Dermal Not classified
- Acute toxicity–Inhalation: vapour Not classified
- Acute toxicity–Inhalation: mist Not classified
- Skin corrosion / irritation Category 2
- Serious eye damage / eye irritation Category 1
- Respiratory or skin sensitization Classification not possible/Not classified
- Germ cell mutagenicity Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (Singel exposure): Classification not possible
Specific target organ toxicity (Repeated exposure): Not classified
Aspiration hazard: Classification not possible

**GHS label elements**

**Pictograms or Symbol**

- Exclamation mark: Corrosion

**Signal Word**

- Danger

**Hazard statement**

- Harmful if swallowed
- Causes skin irritation
- Causes serious eye damage

**Precautionary Statements**

**Prevention**

- Read label and Material Safety Data Sheet before use.
- Do not eat, drink or smoke when using this product
- Wear protective gloves/eye protection.
- Wash hand thoroughly after handling
- Avoid release to the environment

**Response**

- IF SWALLOWED: Rinse mouth. Call a doctor/physician if you feel unwell
- IF ON SKIN: Wash with soap and water
- If skin irritation occurs: Get medical advice/attention
- IF IN EYES: Immediately call a doctor/physician. Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
- Take off contaminated clothing and wash 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**

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
<th>CAS No.</th>
<th>Reference Number in Gazetted List in Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyes</td>
<td>20–30%</td>
<td>Nondisclosure</td>
<td>Nondisclosure (registered)</td>
</tr>
<tr>
<td>Resins</td>
<td>15–25%</td>
<td>Nondisclosure</td>
<td>Nondisclosure (registered)</td>
</tr>
<tr>
<td>Ethyleneglycol monophenyleth</td>
<td>30–45%</td>
<td>122–99–6</td>
<td>(9)–1277</td>
</tr>
<tr>
<td>Benzyl alchol</td>
<td>10–20%</td>
<td>100–51–6</td>
<td>(3)–1011</td>
</tr>
<tr>
<td>Additives</td>
<td>1–5%</td>
<td>Nondisclosure</td>
<td>Nondisclosure (registered)</td>
</tr>
</tbody>
</table>
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 occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
Call a doctor/physician if you feel unwell.

After eye contact:
Immediately call a doctor/physician. Rinse continuously with water for several minutes.
Remove contact lenses if present and easy to do. Continue rinsing.

After ingestion:
Rinse mouth. 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
  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.
  Equipped with suitable extinguishing media. (Preparation for in case of ignition)
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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Permissible concentration</th>
<th>Administrative levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyleneglycol monophenylether</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Benzyl alchol</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

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
Use suitable respiratory protection.

Hand protection
Use suitable protective gloves.

Eye protection
Use suitable eye protection.
Skin/body protection
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Black ink : 100℃</th>
<th>Blue ink : 100℃</th>
<th>Red ink : 100℃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Coloring liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>Peculiar odour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point / Coagulating point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Black ink : 118℃</td>
<td>Blue ink : 121℃</td>
<td>Red ink : 123℃</td>
</tr>
<tr>
<td>Explosive limit UEL</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive limit LEL</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ignition point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Chemical stability
This product is stable in normal condition.

Materials to Avoid
Strong oxidizing agent

Conditions to avoid
High temperature

Incompatible materials
Strong oxidizing agent

Hazardous decomposition products
Nothing in particular.

11. Toxicological information

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity–Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity–Dermal</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity–Inhalation: vapour</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity–Inhalation: mist</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion / irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage / eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Classification not possible / Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
12. Ecological information

<table>
<thead>
<tr>
<th>Specific target organ toxicity (Singel exposure)</th>
<th>Classification not possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific target organ toxicity (Repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Classification not possible</td>
</tr>
</tbody>
</table>

| 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)

Follow all regulations in your country.
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