MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation

BT-2580P

Use of the substance/preparation

Issue date: 06-April-2020
Version #: 01
CAS #: Mixture
Company identification

Zhuhai bentsai printing Technology Co., Ltd.
Zone B, 2nd floor, No. 115 Huawei Road, Xiangzhou, Zhuhai, Guangdong Province, P.R. China

Emergency Information

Tel: 0756-8895581
Fax: 0756-8895581

2. HAZARDS IDENTIFICATION

GHS label elements

Signal word
None.

Hazard symbols
None.

Hazard statement
None.

Precautionary statement

Prevention
None.

Response
None.

Storage
None.

Disposal
None.

Physical hazards
Not classified as a physical hazard.

Health hazards
Not classified as a health hazard.

Environmental hazards
Not classified as an environmental hazard.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
<th>EC-No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>70-80</td>
<td>231-791-2</td>
<td></td>
</tr>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidone</td>
<td>3445-11-2</td>
<td>&lt; 10</td>
<td>222-359-4</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 6.5</td>
<td>210-483-1</td>
<td>Xi; R36</td>
</tr>
<tr>
<td>Aliphatic diol</td>
<td>Proprietary</td>
<td>&lt; 5</td>
<td>Proprietary</td>
<td></td>
</tr>
<tr>
<td>invisible ink. colorant</td>
<td>Proprietary</td>
<td>&lt; 6.5</td>
<td>Proprietary</td>
<td></td>
</tr>
</tbody>
</table>

Composition comments

This ink supply contains an aqueous ink formulation.

For the full text of the R phrases mentioned in this Section, see Section 16.
4. FIRST AID MEASURES

Inhalation  Move to fresh air. If symptoms persist, get medical attention.
Skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Eye contact Do not rub eyes. Immediately flush with large amounts of clean, warm water (lo. pressure) for at least 15 minutes or until particles are removed. If irritation persists get medical attention.
Ingestion If ingestion of a large amount does occur, seek medical attention.
General advice Wash affected areas thoroughly with mild soap and water.

5. FIRE-FIGHTING MEASURES

Flash point  > 212.0 °F (> 100.0 °C) Pensky-Martens Closed Cup US EPA Method 1020
Suitable extinguishing media  Dry chemical, CO2, water spray or regular foam.
Extinguishing media which must not be used for safety reasons  None known.
Unusual fire & explosion hazards  None known.
Specifc methods  None established.
Hazardous combustion products  Refer to section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions  Wear appropriate personal protective equipment.
Environmental precautions  Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

Handling  Avoid contact with skin, eyes and clothing.
Storage  Keep out of the reach of children. Keep away from excessive heat or cold.

8. EXPOSURE CONTROLS/PERSOINAL PROTECTION

Occupational exposure limits  No exposure limits noted for ingredient(s).
Biological limit values  No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures
Additional exposure data  Exposure limits have not been established for this product.
Engineering measures to reduce exposure  Use in a well ventilated area.
Personal protective equipment
Skin and body protection  Not available.
General  Use personal protective equipment to minimize exposure to skin and eye.
Hygiene measures  Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  
  Physical state  Liquid.
  Color  invisible ink
  Odor  Not available.
  pH  8.5 - 9.5
  Melting point/Freezing point  Not available.
  Boiling point, initial boiling point, and boiling range  Not available.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 212.0 °F (&gt; 100.0 °C) Pensky-Martens Closed Cup US EPA Method 1020</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability limit - lower (%)</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Flammability limit - upper (%)

Vapor pressure

Specific gravity

Solubility(ies)

Solubility (water)

Partition coefficient (n-octanol/water)

Decomposition temperature

Viscosity

3.2 - 3.3 cP

Other data

VOC (Weight %)

< 265 g/L

10. STABILITY AND REACTIVITY

Conditions to avoid

Not available.

Hazardous decomposition products

Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Stability

Stable under recommended storage conditions.

Materials to avoid

Incompatible with strong bases and oxidizing agents. Hazardous polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Toxic to reproduction

Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Other information

Complete toxicity data are not available for this specific formulation. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

Toxicological data

Components

Species

Test Results

2-pyrrolidone (CAS 616-45-5)

Acute

Oral

LD50

Guinea pig

5700 mg/kg

Rat

5700 mg/kg
Aliphatic diol (CAS Proprietary)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dermal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 10000 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>3680 mg/kg</td>
</tr>
</tbody>
</table>
## 12. ECOLOGICAL INFORMATION

### Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
</tbody>
</table>

**Ecotoxicity**

No information available. This product is highly soluble in water.

**Environmental effects**

Not available.

**Persistence / degradability**

Not available.

**Bioaccumulation**

- **Bioaccumulative potential**
  - Octanol/water partition coefficient log Kow
    - 2-pyrrolidone: -0.85
    - Aliphatic diol: -0.106

**Aquatic toxicity**

No data available for this product.

**Mobility**

Not available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal instructions**

Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

## 14. TRANSPORT INFORMATION

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**ADR**

Not regulated as dangerous goods.

**Further information**

Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

## 15. REGULATORY INFORMATION

**Labeling**

- **R-phrase(s)**: None.
- **S-phrase(s)**: None.

**Regulatory information**

If the waste in the form of purchase, this product does not belong to the U.S. hazardous waste products out. Users should check if local laws and regulations on hazardous waste. Resource Recovery Act, the processing of the user responsible for determining: both will be included in the hazardous waste containing such materials or derivatives. (40CFR26120-24).

**Not included in the Dangerous Goods**

- **Kyoto protocol**: Not applicable.
- **Montreal Protocol**: Not applicable.
Not applicable.
16. OTHER INFORMATION

Wording o1 the R-phrases in sections 2 and 3

R36 Irritating to eyes.

Disclaimer

This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

Prepared by
Hewlett-Packard Company

Issue date
06-April-2019

Version #
01

This data sheet contains changes from the previous version in section(s):
1. Product and Company Identification: Alternate Trade Names
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
GHS: Classification

Explanation of abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
CAS Chemical Abstracts Service
CERCLA Comprehensive Environmental Response Compensation and Liability Act
CFR Code of Federal Regulations
COC Cleveland Open Cup
DOT Department of Transportation
EPCRA Emergency Planning and Community Right-to-Kno. Act (aka SARA)
IARC International Agency for Research on Cancer
NIOSH National Institute for Occupational Safety and Health
NTP National Toxicology Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
RCRA Resource Conservation and Recovery Act
REC Recommended
REL Recommended Exposure Limit
SARA Superfund Amendments and Reauthorization Act of 1986
STEL Short-Term Exposure Limit
TCLP Toxicity Characteristics Leaching Procedure
TLV Threshold Limit Value
TSCA Toxic Substances Control Act
VOC Volatile Organic Compounds