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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Based on the law and regulation in Japan

For ink unless otherwise specified

Ingredients	CAS Number	EINECS Number	Weight %	Component
Triethanolamine	102-71-6	203-049-8	1.0-1.5	All Colors

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### 4. FIRST AID MEASURES

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- Inhalation : Remove subject to ventilated fresh air. Consult physician if necessary.
- Ingestion : Refer for medical attention.
- Skin contact : Wash the affected area under tepid running water using a mild soap.  
And refer for medical attention if irritation continues.
- Eye contact : Gently rinse the affected eyes with clean water for at least 15 minutes.  
And refer for medical attention if irritation continues.
- First aid facilities : Ensure eyewash and water service are available.
- Medical attention
- Local contamination  
: In case of skin or eye contamination treat as under First Aid Measures.
- Systemic poisoning  
: There is no specific antidote. Treat symptoms.
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### 5. FIRE-FIGHTING MEASURES

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- 5.1. Suitable extinguishing media : Not classed as flammable.  
In case of fire, use water spray, foam, dry chemical powder or carbon dioxide.
- 5.2. Extinguishing media which shall not be used for safety : None
- 5.3. Special exposure hazards arising from the substance or mixture itself, combustion products : CO<sub>2</sub>, CO, NO<sub>x</sub>, and SO<sub>x</sub> are produced after combustion.
- 5.4. Special protective equipment for fire-fighters : Not required
- 5.5. Additional information : None
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### 6. ACCIDENTAL RELEASE MEASURES

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- 6.1. Personal precautions : Use proper ventilation. Use eye and skin protection.
- 6.2. Environmental precautions : Keeping away from drains, surface-and ground-water and soil, possible need to alert the neighbourhood.
- 6.3. Methods for cleaning up : Absorb spill with material (cloth or paper), then place in chemical waste containers.
- 6.4. Additional information : None
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### 7. HANDLING AND STORAGE

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- 7.1. Handling : Avoid rough handling or dropping.
- 7.1.1. Protective measures : Not required in normal use.
- 7.1.2. Measures to prevent aerosol and dust generation : Not required in normal use.
- 7.1.3. Measures required to protect the environment : Not required in normal use.

- 7.1.4. Specific requirements or handling rules : None  
7.1.5. Precautions against fire and explosion : Not required in normal use.  
7.2. Storage : Store in a dry, cool, well-ventilated location.  
7.3. Specific use(s) : Not use it except the ink for writing instruments.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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- 8.1. Exposure limit values : No data
- 8.1.1. Occupational exposure controls : Not available  
8.1.2. Biological limit values : Not available  
8.1.3. DNEL and PNEC-value(s) as applicable : No data
- 8.2. Exposure controls
- 8.2.1. Occupational exposure controls
- a) Respiratory protection : Not required
  - b) Hand protection : Wear suitable gloves.
  - c) Eye protection : Wear eye protection.
  - d) Skin protection : Wear suitable protective clothing.
- 8.2.2. Environmental exposure controls
- : ACGIH TLV-TWA Triethanolamine : 5 mg/m<sup>3</sup>

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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For ink unless otherwise specified

### 9.1. General information

- Appearance : Viscosity liquid  
[Color] Black, Red, Blue, Green,  
Odor : Slight characteristic

### 9.2. Important health, safety and environmental information

- pH : 8-10  
Boiling point / boiling range : About 100 degrees Celsius  
Flash point : Boils without flashing  
Flammability (solid, gas) : None  
Explosive properties : None  
Oxidizing properties : None  
Vapor pressure : No data  
Relative density : 1.05-1.10 (at 20 degrees Celsius)  
Solubility : Not applicable  
Water solubility : Soluble  
Partition coefficient: n-octanol / water : Not available  
Viscosity : 3-5 mPa · s (at 20 degrees Celsius)  
Vapor density : No data  
Evaporation rate : No data

- 9.3. Other information : None

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**10. STABILITY AND REACTIVITY**

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|--|----------------------------|
| 10.1. Conditions to avoid              | : This material is stable. |
| 10.2. Materials to avoid               | : This material is stable. |
| 10.3. Hazardous decomposition products | : No data                  |

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**11. TOXICOLOGICAL INFORMATION**

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For ink unless otherwise specified

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|--|-----------------|---------------------------------|
| 11.1. Toxicokinetics, metabolism and distribution                      | : No data       |                                 |
| 11.2. Acute effects (acute toxicity, irritation and corrosivity)       |                 |                                 |
| : Acute toxicity   | Triethanolamine | LD <sub>50</sub> 4.92ml/kg(rat) |
| 11.3. Sensitization  | : No data       |                                 |
| 11.4. Repeated dose toxicity   | : No data       |                                 |
| 11.5. CMR (carcinogenity, mutagenicity, and toxicity for reproduction) | : No data       |                                 |

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**12. ECOLOGICAL INFORMATION**

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|-------------------------------------|-----------|
| 12.1. Ecotoxicity                   | : No data |
| 12.2. Mobility                      | : No data |
| 12.3. Persistence and degradability | : No data |
| 12.4. Bioaccumulative potential     | : No data |
| 12.5. Results of PBT assessment     | : No data |
| 12.6. Other adverse effects         | : None    |

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**13. DISPOSAL CONSIDERATIONS**

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Follow all regulations in your country.

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**14. TRANSPORT INFORMATION**

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|------------------------------------|------------------|
| 14.1. UN number                    | : Not applicable |
| 14.2. Class                        | : Not applicable |
| 14.3. Proper shipping name         | : Not applicable |
| 14.4. Packing group                | : Not applicable |
| 14.5. Marine pollutant             | : Not applicable |
| 14.6. Other applicable information | : None           |

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**15. REGULATORY INFORMATION**

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Follow all regulations in your country.

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**16. OTHER INFORMATION**

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The information here is given in good faith, but no warranty, express or implied, is made.  
Final determination of suitability of any material is the sole responsibility of the user.