

MATERIAL SAFETY DATA SHEET

1. Identity **Ink for print-head IH-20(BLACK)**

Manufacturer : SEIKO EPSON CORPORATION Matsumoto Minami Plant
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Section : SD Design & Engineering Support Group

2. Composition/Information on Ingredients

This product is a mixture of the following:

Water (CAS No.7732-18-5) : Greater than 70 wt%
Glycerol (CAS No.56-81-5) : Less than 15 wt%
Azo-Dyestuff : Less than 5 wt%
Others

3. Hazard Identification

This product is not classified as hazardous or toxic.

Main hazards or toxicity are as follows:

Hazards : None observed.

Toxicity : Slightly irritation for the eyes may occur.

If the product contacts the eye, a black stain will form around the eyes, and slight redness and slight swelling of the conjunctivae may occur.

If the product contacts the skin, a black stain will form.

No corrosion, acute oral toxicity, or mutation have been observed.

4. First - Aid Measures

Skin Contact : Rinse with large quantities of water and wash off with soap or other cleanser.
If the black stain does not wash off, rub it gently with a soaped towel.

Eye Contact : Immediately rinse with large quantities of fresh water.

If there is still irritation or pain after 15 minutes of rinsing, consult an ophthalmologist without delay.

When rinsing the eyes, open the eyelids with your fingers to ensure that water reaches the eyeballs and all parts of the lids.

Inhalation : Inhalation of fumes generated under normal use conditions presents no problem.

However, the inhalation of fumes formed by heating should be avoided.

If large quantities of such fumes are inhaled, move the victim to fresh air, keep them quiet and warm, and consult a physician.

Ingestion : Induce vomiting by inserting fingers in the throat, or by other means.

5. Fire - Fighting Measures

Extinguish with water-spray, CO₂ gas, dry chemical, foam.

Fire fighters should use self-contained respiration equipment to avoid inhalation of heat- or explosion-induced fumes.

6. Accidental Release Measures

If a spill or leak of ink occurs, wear protective glasses and rubber gloves, and wipe the ink with an absorbent material such as a rag or tissues, and discard.

Clean black stains with water.

7. Handling and Storage

Do not adhere to the skin, eyes, clothes.

Store at room temperature.

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8. Exposure Controls/Personal Protection

Eye Protection : When the ink-cartridge containing the ink is installed in the printer and used under normal conditions, no special eye protection is necessary.

Skin Protection : When the ink-cartridge containing the ink is installed in the printer and used under normal conditions, no special skin protection is necessary.

Respiratory : When the ink-cartridge containing the ink is installed in the printer and used under normal conditions, respiratory protection is not necessary.

Ventilation : When the ink-cartridge containing the ink is installed in the printer and used under normal conditions, no special ventilation is necessary.

9. Physical and Chemical Properties

Form : Liquid

Color : Black

Odor : Slight

Boiling Point : Approximately 100 degrees C

Melting Point : Approximately -5 degrees C (23 F).

Viscosity : Approximately 2.3 mPa·s : at 25 degrees C

Solubility in water : The infinite

pH value : Approximately 8

Flash Point : Over 60 degrees C (Measured by ASTM D93)

10. Stability and Reactivity

Stability : Extremely stable under normal conditions.

Polymerization : Not expected.

Materials to Avoid : Strong oxidizing or reducing agents.

Hazardous Decomposition Products:

CO gas, CO₂ gas, nitric oxide, and toxic fumes may be generated when rapidly brought to high temperature

11. Toxicological Information

Acute oral toxicity (LD₅₀) :

Oral rat LD₅₀ 5,000 mg/kg or more.

Acute eye irritation/corrosion :

Testing on rabbits showed slight redness and slight swelling of the conjunctivae during several days of exposure. These symptoms disappeared within one week of exposure.

Acute dermal irritation :

Testing on rabbits showed black staining on skin directly after/corrosion exposure to ink. These symptoms disappeared within one week of exposure. However no irritation or corrosion for skin is observed.

Mutagenic activity :

This ink did not show mutagenic activity in the four strains of Salmonella typhimurium (TA98,TA100,TA1535, and TA1537) and the Escherichia coli mutant WP2 uvrA.

Sensitization : Not observed in testing on guinea pigs.

12. Ecological Information

No information on ecological effects is obtained.

13. Disposal Considerations

Waste disposal should be in accordance with federal, state and local regulations.

14. Transport Information

In order to avoid damage to the properties of the ink, do not allow the temperature to rise above 40 degrees C(104F).

15. Regulatory Information

No information on regulations is obtained.

16. Other Information

No other information is obtained.
