1. Identification
GHS Product Identifier
Mixture identification: Ink Pack, T46C8

Recommended use of the chemical and restrictions on use
Recommended use: Ink for inkjet printing

Supplier's details
Company: SEIKO EPSON CORPORATION
80 Harashinden, Hirooka, Shiojiri-shi, Nagano-ken, 399-0785 JAPAN
Phone number: +81-263-52-2552

Competent person responsible for the safety data sheet:
MSDS_HRO@exc.epson.co.jp

Emergency phone number
Phone number: +81-263-52-2552

2. Hazard identification
Classification of the substance or mixture
⚠️ Warning, Skin Sens. 1, May cause an allergic skin reaction.

GHS label elements, including precautionary statements
Hazard pictograms:

⚠️ Warning
Hazard statements:
H317 May cause an allergic skin reaction.

Precautionary statements:
P261 Avoid breathing dust/mist/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:
None

Other hazards which do not result in a classification
No other hazards

3. Composition/information on ingredients
Substances
No
Mixtures
Hazardous components within the meaning of GHS and related classification:

<table>
<thead>
<tr>
<th>Qty</th>
<th>Name</th>
<th>Ident. Number</th>
<th>Classification</th>
</tr>
</thead>
</table>

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### 4. First-aid measures

**Description of necessary first-aid measures**

- **In case of skin contact:**
  - Immediately take off all contaminated clothing.
  - Remove contaminated clothing immediately and dispose off safely.

- **In case of eyes contact:**
  - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- **In case of Ingestion:**
  - Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

- **In case of Inhalation:**
  - Remove casualty to fresh air and keep warm and at rest.

**Most important symptoms/effects, acute and delayed**

- None

**Indication of immediate medical attention and special treatment needed, if necessary**

- In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Treatment:**

- None

### 5. Fire-fighting measures

**Suitable extinguishing media**

- Water
- Carbon dioxide (CO2)

**Unsuitable extinguishing media:**

- None in particular.

**Special hazards arising from the chemical**

- Do not inhale explosion and combustion gases.
- Burning produces heavy smoke.

**Hazardous combustion products:**

- None

**Explosive properties:**

- No data available

**Oxidizing properties:**

- No data available

**Special protective actions for fire-fighters**

- Use suitable breathing apparatus.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
- Wear personal protection equipment.
- Remove persons to safety.
- See protective measures under point 7 and 8.

Environmental precautions
- Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
- Retain contaminated washing water and dispose it.
- In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

Methods and material for containment and cleaning up
- Wash with plenty of water.

7. Handling and storage

Precautions for safe handling
- Avoid contact with skin and eyes, inhalation of vapours and mists.
- Don’t use empty container before they have been cleaned.
- Before making transfer operations, assure that there aren’t any incompatible material residuals in the containers.
- Contaminated clothing should be changed before entering eating areas.
- Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities
- Keep away from food, drink and feed.
- Incompatible materials: None in particular.
- Instructions as regards storage premises:
  - Adequately ventilated premises.

8. Exposure controls/personal protection

Control parameters
- Glycerol - CAS: 56-81-5
  - OEL Type: OSHA - TWA: 5 mg/m3 - Notes: Respirable dust
  - OEL Type: OSHA - TWA: 15 mg/m3 - Notes: Total dust
- Triethanol amine - CAS: 102-71-6
  - OEL Type: ACGIH - TWA(8h): 5 mg/m3

DNEL Exposure Limit Values
- No data available

PNEC Exposure Limit Values
- No data available

Appropriate engineering controls:
- None

Individual protection measures, such as personal protective equipment (PPE)
- Eye protection: Use close fitting safety goggles, don't use eye lens.
- Protection for skin:
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:
Not needed for normal use.

9. Physical and chemical properties

Appearance and colour: Black Liquid
Odour: Slightly
Odour threshold: No data available
PH: 7.5 ~ 8.7 at 20 °C
Melting point / freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: Does not flash until 100 °C / 212 °F (closed cup method, ASTM D 3278)
Evaporation rate: No data available
Solid/gas flammability: Not Relevant
Upper/lower flammability or explosive limits: No data available
Vapour pressure: No data available
Vapour density: No data available
Relative density: No data available
Solubility in water: Complete
Solubility in oil: No data available
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: < 5 mPa·s at 20 °C

10. Stability Toxicological information

Reactivity
Stable under normal conditions
Chemical stability
Stable under normal conditions
Possibility of hazardous reactions
None

Conditions to avoid
Stable under normal conditions.

Incompatible materials
None in particular.

Hazardous decomposition products
Acrolein (CAS #107-02-8);
When glycerols is heated over 300°C, it will decompose into acrolein.

11. Toxicological information

Information on toxicological effects
Toxicological information of the product:
f) carcinogenicity:
Does not contain carcinogens (Ref. 1)
g) reproductive toxicity:
   Does not contain reproductive toxicity and developmental toxic substances (Ref. 2)

Toxicological information of the main substances found in the product:

Glycerol - CAS: 56-81-5
a) acute toxicity:
   Test: LD50 - Route: Oral - Species: Guinea pig = 7750 mg/kg - Source: Journal of
   Industrial Hygiene and Toxicology. Vol. 23, Pg. 259, 1941
   Test: LDLo - Route: Oral - Species: Human = 1428 mg/kg - Source: "Toxicology of
   Pg. 288, 1969.

C.I. Disperse Blue 360
a) acute toxicity:
   Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
   Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg

e) germ cell mutagenicity:
   Test: Mutagenesis - Species: Salmonella Typhimurium Positive

Triethanol amine - CAS: 102-71-6
a) acute toxicity:
   Test: LD50 - Route: Oral - Species: Guinea pig = 2200 mg/kg - Source: "Toxicometric
   Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al.,
   Moscow, Centre of International Projects, GKNT, 1982; Pg. 114, 1982.
   Test: LD50 - Route: Oral - Species: Mouse = 5846 mg/kg - Source: Science Reports of
   the Research Institutes, Tohoku University, Series C: Medicine. Vol. 36(1-4), Pg. 10,
   1989.

If not differently specified, the information listed below must be considered as N.A.:
   a) acute toxicity;
   b) skin corrosion/irritation;
   c) serious eye damage/irritation;
   d) respiratory or skin sensitisation;
   e) germ cell mutagenicity;
   f) carcinogenicity;
   g) reproductive toxicity;
   h) STOT-single exposure;
   i) STOT-repeated exposure;
   j) aspiration hazard.

12. Ecological information
   Toxicity
      Adopt good working practices, so that the product is not released into the environment.
      No data available
   Persistence and degradability
      No data available
   Bioaccumulative potential
      No data available
   Mobility in soil
      No data available
   Other adverse effects
      None

13. Disposal considerations
   Disposal methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.

14. Transport information
   UN number
   Not classified as dangerous in the meaning of transport regulations.
   UN proper shipping name
   No data available
   Transport hazard class(es)
   No data available
   Packing group, if applicable
   No data available
   Environmental hazards
   No data available
   Special precautions for user
   No data available
   Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
   No data available

15. Regulatory information
   Safety, health and environmental regulations specific for the product in question
   This Safety Data Sheet has been prepared according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Fifth revised edition.

16. Other information
   Full text of phrases referred to in Section 3:
   H228 Flammable solid.
   H373 May cause damage to organs through prolonged or repeated exposure.
   H413 May cause long lasting harmful effects to aquatic life.
   H319 Causes serious eye irritation.
   H317 May cause an allergic skin reaction.

Safety Data Sheet dated December 4, 2018, Revision: 2.0
Paragraphs modified from the previous revision:
2. Hazard identification
3. Composition/information on ingredients
8. Exposure controls/personal protection
9. Physical and chemical properties
11. Toxicological information

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:
- ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
- SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold
- CCNL - Appendix 1
- Ref. 1 ·IARC Monographs on the Evaluation Carcinogenic Risks to Humans (IARC: International Agency for Research on Cancer)
- Journal of Occupational Health (JOH) (Japan Society of Occupational Health (JSOH))
- TLVs and BEIs (ACGIH: American Conference of Governmental Industrial Hygienists)
The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
DNEL: Derived No Effect Level.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
INCI: International Nomenclature of Cosmetic Ingredients.
KST: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LTE: Long-term exposure.
PNEC: Predicted No Effect Concentration.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE: Short-term exposure.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day (ACGIH Standard).
WGK: German Water Hazard Class.