

## Safety Data Sheet

### 1. Chemical identifier and company identification

Chemical identifier

Mixture identification:

Trade name: Ink Cartridge T9132

Recommended use and restrictions on use of the chemicals

Recommended use:

Ink for inkjet printing

Supplier's details

Manufacturer :

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. Hazards identification

GHS classification

The product is not classified as dangerous according to JIS Z 7252:2014.

GHS label elements

The product is not classified as dangerous according to JIS Z 7252:2014.

Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

None

Other hazards

No other hazards

### 3. Composition and information ingredients

Distinction of substances and mixtures: Mixtures

Hazardous components within the meaning of JIS Z 7252:2014 and related classification:

Qty	Name	Ident. Number	Classification
65% ~ 80%	Water	CAS: 7732-18-5 EC: 231-791-2	The product is not classified as dangerous according to JIS Z 7252:2014.
10% ~ 12.5%	Glycerol	CAS: 56-81-5 EC: 200-289-5	The product is not classified as dangerous according to JIS Z 7252:2014.
3% ~ 5%	Copper compounds as colorants		The product is not classified as dangerous according to JIS Z 7252:2014.
1% ~ 3%	Triethanol amine	CAS: 102-71-6 EC: 203-049-8	The product is not classified as dangerous according to JIS Z 7252:2014.

### 4. First-aid measures

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Description of necessary first-aid measures

In case of skin contact:

Wash with plenty of water and soap.

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

Special notes to an attending physician

Treatment:

None

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### 5. Fire-fighting measures

Suitable and unsuitable extinguishing media

Water.

Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties: N.A.

Oxidizing properties: N.A.

Protection of 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.

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### 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 method and materials for cleaning up

Wash with plenty of water.

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### 7. Handling and storage precautions

Safety handling precautions

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Safe storage conditions, including any incompatibilities

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Keep away from food, drink and feed.  
Incompatible materials:  
None in particular.  
Instructions as regards storage premises:  
Adequately ventilated premises.

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### 8. Exposure controls and personal protection

Control parameters  
Glycerol - CAS: 56-81-5  
- OEL Type: OSHA - LTE: 5 mg/m<sup>3</sup> - Notes: PEL, as mist, respirable fraction  
- OEL Type: OSHA - LTE: 15 mg/m<sup>3</sup> - Notes: PEL, as mist, total dust  
DNEL Exposure Limit Values  
N.A.  
PNEC Exposure Limit Values  
N.A.  
Engineering controls  
Appropriate engineering controls:  
None  
Personal protective equipment  
Eye protection:  
Not needed for normal use. Anyway, operate according good working practices.  
Protection for skin:  
No special precaution must be adopted for normal use.  
Protection for hands:  
Not needed for normal use.  
Respiratory protection:  
Not needed for normal use.  
Thermal Hazards:  
None

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### 9. Physical and chemical properties

Appearance and colour:	Cyan Liquid
Odour:	Slightly
Odour threshold:	N.A.
pH:	8.2 ~ 9.6 at 20 °C
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Flash point:	Does not flash until 100 °C / 212 ° F (closed cup method, ASTM D 3278)
Evaporation rate:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour pressure:	N.A.
Vapour density:	N.A.
Relative density:	N.A.
Solubility in water:	Complete
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	< 5 mPa·s at 20 °C

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### 10. Stability and reactivity

Reactivity  
Stable under normal conditions

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Chemical stability  
Stable under normal conditions  
Hazardous reactions  
None  
Conditions to avoid  
Stable under normal conditions.  
incompatible materials  
None in particular.  
Hazardous decomposition products  
None.

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### 11. Hazard information

Toxicological information of the mixture:

e) germ cell mutagenicity:

Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative

Toxicological information of the main substances found in the mixture:

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 Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 288, 1969. - Notes: BEHAVIORAL: HEADACHE GASTROINTESTINAL: NAUSEA OR VOMITING

Copper compounds as colorants

a) acute toxicity:

Test: LD50 - Route: Intraperitoneal - Species: Rat > 3 g/kg - Source: Gigiena i Sanitariya. For English translation, see HYSAAV. Vol. 50(1), Pg. 92, 1985.

Test: LD50 - Route: Oral - Species: Rat > 15 g/kg - Source: Gigiena i Sanitariya. For English translation, see HYSAAV. Vol. 50(1), Pg. 92, 1985.

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, 1982Vol. -, 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. - Notes: GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" KIDNEY, URETER, AND BLADDER: OTHER CHANGES BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

If not differently specified, the information listed below must be considered as N.A.:

Acute toxicity;  
Skin irritation/corrosion;  
Serious eye damage/irritation;  
Respiratory or skin sensitization;  
Reproductive cell mutagenicity;  
Carcinogenicity;  
Reproductive toxicity;  
Specific target organ toxicity-single exposure;  
Specific target organ toxicity-repeated exposure;  
Aspiration hazard.

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### 12. Ecological information

Ecotoxicity

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Adopt good working practices, so that the product is not released into the environment.

N.A.

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Hazard to the ozone layer

N.A.

Other adverse effects

None

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### 13. Notes on disposal

Disposal methods

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

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### 14. Transport information

UN number

Not classified as dangerous in the meaning of transport regulations.

Name of product

N.A.

UN classification

N.A.

Packing group

N.A.

Marine pollutant

N.A.

Transport in bulk according to annex II of MARPOL 73/78 and the IBC code

N.A.

Special precautions for user

N.A.

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### 15. Regulatory information

Safety, health and environmental regulations specific for the product in question

This SDS complies with "JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)". The classification of the product in this SDS complies with "JIS Z 7252:2014" Classification of chemicals based on GHS.

Fire Service Law

Not dangerous substance under Fire Service Law

ISHL - Industrial Safety and Health Law

Copper compounds as colorants:	Substance requires a GHS SDS according to the ISHL List., Substance must be shown in label according to the ISHL List. No. 379
Triethanol amine:	Substance requires a GHS SDS according to the ISHL List., Substance must be shown in label according to the ISHL List. No. 381

CSCL - Chemical Safety and Control Law

Not applicable

PRTR Law

Not applicable

Poisonous & Deleterious Substances Control Law

Not applicable

## Safety Data Sheet

Narcotics and Psychotropic Control Law  
Not applicable

### 16. Other information

This safety data sheet has been completely updated in compliance to Regulation 2015/830.

Date of preparation of this SDS: 2016/6/2

Key literature references and sources: None

Key/legend to the abbreviations and acronyms:

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 MSDS 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).
IMDG:	International Maritime Code for Dangerous Goods.
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.