1. IDENTIFICATION

Product identifier
Mixture identification:
Trade name: Ink Cartridge, T8348

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

Details of the supplier of the safety data sheet
Company: EPSON AMERICA Inc.
3840 Kilroy Airport Way
Long Beach, CA  90806
United States
Telephone : 562.276.1369
Emergency phone number Telephone : 562.276.1369

2. HAZARD(S) IDENTIFICATION

Classification of the chemical
The product is not classified as dangerous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).

Label elements
The product is not classified as dangerous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazard pictograms: None
Hazard statements: None
Precautionary statements: None
Special Provisions: None
Hazards not otherwise classified identified during the classification process: None
Additional classification information
NFPA rating:
HMIS rating:

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances No
Mixtures Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:
4. FIRST-AID MEASURES
Description of necessary 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
Indication of immediate medical attention and special treatment needed
Treatment:
None

5. FIRE-FIGHTING MEASURES
Suitable extinguishing media:
Water.
Carbon dioxide (CO2).
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: No data available
Oxidizing properties: No data available
Special protective equipment and precautions 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 all sources of ignition.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Remove persons to safety.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

Methods and materials 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.
Do not use on extensive surface areas in premises where there are occupants.
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.
Storage temperature:
Store at ambient temperature.

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
Carbon black - CAS: 1333-86-4
- OEL Type: ACGIH - TWA(8h): 3 mg/m3
- OEL Type: OSHA - TWA: 3.5 mg/m3
- OEL Type: JSOH - TWA: 1 mg/m3 - Notes: as Class 2 Dusts (Respirable dust)
- OEL Type: JSOH - TWA: 4 mg/m3 - Notes: as Class 2 Dusts (Total dust)
- Notes: as total dust

DNEL Exposure Limit Values
No data available

PNEC Exposure Limit Values
No data available

Appropriate engineering controls:
None

Individual protection measures
Eye protection:
Use personal protective equipment as required.

Protection for skin:
Use personal protective equipment as required.

Protection for hands:
Use personal protective equipment as required.

Respiratory protection:
Use personal protective equipment as required.

Thermal Hazards:
None
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: Black Liquid
Odour: Slightly
Odour threshold: No data available
PH: 9.2 ~ 10.2 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 212 °F/100 °C (closed cup method, ASTM D 3278)
Evaporation rate: No data available
Solid/gas flammability: No data available
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: Soluble
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
Miscibility: No data available
Fat Solubility: No data available
Conductivity: No data available

10. STABILITY AND REACTIVITY

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
None.

11. TOXICOLOGICAL INFORMATION

Toxicological information of the product:

e) germ cell mutagenicity:
   Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli Negative

f) carcinogenicity:
   Components do not come under carcinogens (Ref. 1), except for Carbon black

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
a) acute toxicity:
   Test: LD50 - Route: Dermal - Species: Rabbit > 3 g/kg - Source: Acute Toxicity Data. Journal of the American College of Toxicology, Part B. Vol. 15
   Test: LD50 - Route: Oral - Species: Rat > 15400 mg/kg - Source: Acute Toxicity Data. Journal of the American College of Toxicology, Part B. Vol. 15

Carbon black - CAS: 1333-86-4
With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this ink cartridge, emissions to air of carbon black during normal printing use have not been found. IARC, the International Agency for Research on Cancer, has found printing inks to be not classifiable as human carcinogens.

Substance(s) listed on the NTP report on Carcinogens:
None.
Substance(s) listed on the IARC Monographs:
Carbon black - Group 2B.
Substance(s) listed as OSHA Carcinogen(s):
None.
Substance(s) listed as NIOSH Carcinogen(s):
None.

12. ECOLOGICAL INFORMATION
   Ecotoxicity
   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
   Waste treatment and 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
   No data available
   Environmental hazards
   No data available
   Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
   No data available
   Special precautions
   No data available
15. REGULATORY INFORMATION

USA - Federal regulations
TSCA - Toxic Substances Control Act
   TSCA inventory: all the components are listed on the TSCA inventory.
   TSCA listed substances:
   None.
SARA - Superfund Amendments and Reauthorization Act
   Section 302 – Extremely Hazardous Substances: no substances listed.
   Section 304 – Hazardous substances: no substances listed.
   Section 313 – Toxic chemical list: no substances listed.
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
   No substances listed.
CAA - Clean Air Act
   CAA listed substances:
   Glycerol is listed in CAA Section 111.
CWA - Clean Water Act
   CWA listed substances:
   None.

USA - State specific regulations
California Proposition 65
   Substance(s) listed under California Proposition 65:
   None.
Massachusetts Right to know
   Substance(s) listed under Massachusetts Right to know:
   Carbon black.
   1,1',1''-nitrilotripropan-2-ol; triisopropanolamine.
New Jersey Right to know
   Substance(s) listed under New Jersey Right to know:
   Carbon black.
Pennsylvania Right to know
   Substance(s) listed under Pennsylvania Right to know:
   Carbon black.
   1,1',1''-nitrilotripropan-2-ol; triisopropanolamine.

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Safety Data Sheet dated March 12, 2019, Revision: 2.0
Sections modified from the previous revision:
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
11. TOXICOLOGICAL INFORMATION
15. REGULATORY INFORMATION

Main bibliographic sources:
Ref. 1 ·Journal of Occupational Health (JOH) (Japan Society of Occupational Health (JSOH))
·TLVs and BEIs (ACGIH: American Conference of Governmental Industrial Hygienists)
·IRIS Carcinogenic Assessment (IRIS: Integrated Risk Information System of US EPA)
·Annex VI of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT
   AND OF THE COUNCIL of 16 December 2008 on classification, labelling and
   packaging of substances and mixtures, amending and repealing Directives 67/548/EEC
·MAK und BAT Werte Liste (DFG: German Research Foundation)
Disclaimers:
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. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

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.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
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.
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
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).