

Safety Data Sheet

Section 1 : Identification of substance and company undertaking

- 1.1 Product identifier: EPSON INK CARTRIDGE T410020
- 1.2 Relevant substance use: Ink for Epson
Printers
- 1.3 Supplier details
- Distributor :* Epson America, Inc.
- Address :* 3840 Kilroy Airport Way
Long Beach, CA 90806
United States
- Telephone :* 562.276.1369
- FAX :* 562.997.5799
- 1.4 Emergency telephone number : 562.276.1369

Section 2 : Hazard identification

- 2.1 GHS classification : Not hazardous
- 2.2 Label elements
- Symbols :* None
- Signal word :* None
- Hazard statements:* None
- Precautionary statements:* P102 Keep out of reach of children
P302+P352 IF ON SKIN: Wash with soap and water
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3 : Composition/information on ingredients

Substance/Mixture : Mixture (ink composition)

Ink Composition	CAS No.	% By Weight	Remark
Water	7732-18-5	60 - 65	none
Diethylene glycol	111-46-6	10 - 15	none
Glycerols	56-81-5	5 - 10	none
TEGBE	143-22-6	5 - 10	none
Sodium phthalocyanine sulfonated salt	14285-61-1	1 - 5	none
Alkane diol	160709-21-7	1 - 5	none
Polyethylene glycol	25322-68-3	1 - 2	none

Section 4 : First aid measures

4.1 Description of measures

- Eyes :* Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.
- Skin :* IF ON SKIN : Wash with soap and water. Take off contaminated. If skin irritation occurs, get medical advice/attention.
- Inhalation :* Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Ingestion :* Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important

symptoms and effects, Ink contact with skin may cause irritation, swelling, or redness.
both acute and delayed:

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

- Suitable media :* Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.
- Unsuitable media :* None

5.2 Special hazards from mixture :

None

5.3 Firefighters :

Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Non-emergency personnel :* Eye and skin protection required during clean-up. Use proper ventilation.
- Emergency responders:* None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

- Spill containment :* Use sponges to wipe-up ink.
- Spill clean-up :* Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.
- Other information :* Do not dispose of waste to sewer.

6.4 Reference to other sections : Please refer to Section 13 for disposal.

Section 7 : Handling and storage

7.1 Precautions for safe handling

Recommendations : Keep out of reach of children and do not drink ink.
Do not dismantle cartridge.

Occupation hygiene : Avoid contact with skin, eyes, and clothing.
In the case of skin contact, wash with soap and water.

7.2 Safe storage : Do not store cartridges in high or freezing temperatures.
Keep cartridges out of direct sunlight.
Do not store cartridges with oxidizing agents or explosives.
Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

Section 8 : Exposure controls / personnel protection

8.1 Control parameters : Glycerols (CAS No. 56-81-5)
ACGIH TLV-TWA 8-hour Exposure Limit is 10 mg/m³ as glycerin mist.
OSHA Z-1 PEL is 5 mg/m³ as glycerin mist, respirable fraction.
OSHA Z-1 PEL is 15 mg/m³ as glycerin mist, total dust.

8.2 Exposure controls

Engineering controls : Proper ventilation

Personal protection : Personal protective equipment is not required under suitable use.
If there is a possibility of ink exposure, wear protective gloves, clothing, eye,
and face protection.

Respiratory protection is not required under suitable use.

Thermal hazards are not known under suitable use.

*Environmental exposure
controls :*

Not established

Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Cyan liquid

Odor : None

Odor threshold : No data available

pH : 9.0 - 10.0

Melting point : Less than 0°C

Freezing point : Less than 0°C

Initial boiling point : Greater than 100°C

Boiling range : Greater than 100°C

Flash point : Greater than 110°C (closed cup, ASTM D3278)

Evaporation rate : No data available

Flammability(solid/gas): Not applicable (liquid)

Upper/lower

flammability: No data available

<i>Upper/lower explosive limits :</i>	No data available
<i>Vapor pressure :</i>	No data available
<i>Vapor density :</i>	Greater than 1 (air = 1)
<i>Relative density :</i>	1.07 at 20°C
<i>Solubility(ies) :</i>	Soluble in water
<i>Partition coefficient :</i>	N-octanol/water, no data available
<i>Auto ignition temp :</i>	No data available
<i>Decomposition temp :</i>	No data available
<i>Viscosity :</i>	Less than 5 mPa-s at 20°C
<i>Explosive properties :</i>	None
<i>Oxidizing properties :</i>	None

Section 10 : Stability and reactivity

10.1 Reactivity :	Stable under normal temperature and pressure
10.2 Chemical stability :	Stable under normal temperature and pressure
10.3 Hazard reactions :	None
10.4 Conditions to avoid :	High and freezing temperatures
10.5 Incompatible materials :	Oxidizers and explosives
10.6 Hazard decomposition :	No data available

Section 11 : Toxicological information

11.1 Toxicological effects	
<i>Acute toxicity Oral LD₅₀ :</i>	>5000 mg/kg (rats)
<i>Acute toxicity Dermal LD₅₀ :</i>	>2000 mg/kg (rats)
<i>Irritation Eye :</i>	No data available
<i>Irritation Skin :</i>	No data available
<i>Corrosivity :</i>	No data available
<i>Sensitization :</i>	No data available
<i>Carcinogenicity :</i>	No data available
<i>Mutagenicity :</i>	No data available
<i>Reproduction toxicity :</i>	No data available

Section 12 : Ecological information

12.1 Toxicity :	No data available
12.2 Persistence and degradability :	No data available
12.3 Bio accumulative potential :	No data available
12.4 Mobility in soil :	No data available
12.5 PBT and vPvB assessment :	No data available
12.6 Other adverse effects :	No data available

Section 13 : Disposal considerations

13.1 Waste treatment methods :	Disposal should be in accordance with federal, state, and local requirements.
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Section 14 : Transportation information

14.1 UN number :	Not applicable
14.2 Proper shipping name :	Not applicable
14.3 Transport hazard class :	Not applicable
14.4 Packing group :	Not applicable
14.5 Environmental hazards :	Not applicable
14.6 Special precautions :	Not applicable
14.7 Bulk transport Annex II of MARPOL 73/78 and IBC Code :	Not applicable

Section 15 : Regulation information (safety, health, and environmental)

15.1 U.S. Information

<i>OSHA Inhalation Hazard :</i>	Not Regulated (29 CFR 1910.1000(d)(1)(i))
<i>TSCA Sec. 4(a) Final Test Rules :</i>	Not Regulated
<i>TSCA Sec. 5 SNUR :</i>	Not Regulated
<i>TSCA Sec. 8(a) PAIR :</i>	Not Regulated
<i>TSCA Sec. 12(b) 1-time Export :</i>	Not Regulated
<i>Clean Air Act Sec. 112 HAP :</i>	TEGBE (CAS# 143-22-6)
<i>EPCRA Sec. 313 (SARA Title III) :</i>	Not Regulated
<i>NFPA Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
<i>HMIS Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
<i>California Proposition 65 :</i>	Not Regulated

15.2 Canada Information :

<i>WHMIS Controlled Product :</i>	Not applicable (manufactured article)
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15.3 Chemical safety

assessment :	Chemical safety assessment on ink has not been conducted
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Section 16 : Other information

This SDS adheres to U.S. regulatory requirements and standards and may not meet the regulatory requirements in other locations.

This is a revised Safety Data Sheet which replaces all prior U.S. SDS for this substance.

This "Safety Data Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or uses and disposal information which may accompany the substance. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. Epson does not warrant the completeness or accuracy of the information contained herein. It is subject to revision from time to time.

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- 2.1 GHS classification : Not hazardous
- 2.2 Label elements
- Symbols :* None
- Signal word :* None
- Hazard statements:* None
- Precautionary statements:* P102 Keep out of reach of children
P302+P352 IF ON SKIN: Wash with soap and water
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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Substance/Mixture : Mixture (ink composition)

Ink Composition	CAS No.	% By Weight	Remark
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Glycerols	56-81-5	5 - 10	none
TEGBE	143-22-6	5 - 10	none
Polyethylene glycol	25322-68-3	1 - 5	none
Pyrrolidinone	28261-54-3	1 - 5	none
Alkane diol	160709-21-7	1 - 5	none
Carboxy sulfophenyl pyrazolone sodium salt	52126-51-9	1 - 5	none
Naphthalene sulfonic acid methyl propyl sodium salt	28348-65-4	1 - 5	none

Section 4 : First aid measures

4.1 Description of measures

- Eyes :* Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.
- Skin :* IF ON SKIN : Wash with soap and water. Take off contaminated. If skin irritation occurs, get medical advice/attention.
- Inhalation :* Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Ingestion :* Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important

symptoms and effects, Ink contact with skin may cause irritation, swelling, or redness.
both acute and delayed:

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

Suitable media : Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.

Unsuitable media : None

5.2 Special hazards from mixture :

None

5.3 Firefighters :

Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Non-emergency personnel : Eye and skin protection required during clean-up. Use proper ventilation.

Emergency responders: None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

Spill containment : Use sponges to wipe-up ink.

Spill clean-up : Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.

Other information : Do not dispose of waste to sewer.

6.4 Reference to other sections : Please refer to Section 13 for disposal.

Section 7 : Handling and storage

7.1 Precautions for safe handling

Recommendations : Keep out of reach of children and do not drink ink.
Do not dismantle cartridge.

Occupation hygiene : Avoid contact with skin, eyes, and clothing.
In the case of skin contact, wash with soap and water.

7.2 Safe storage : Do not store cartridges in high or freezing temperatures.
Keep cartridges out of direct sunlight.
Do not store cartridges with oxidizing agents or explosives.
Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

Section 8 : Exposure controls / personnel protection

8.1 Control parameters : Glycerols (CAS No. 56-81-5)
ACGIH TLV-TWA 8-hour Exposure Limit is 10 mg/m³ as glycerin mist.
OSHA Z-1 PEL is 5 mg/m³ as glycerin mist, respirable fraction.
OSHA Z-1 PEL is 15 mg/m³ as glycerin mist, total dust.

8.2 Exposure controls

Engineering controls : Proper ventilation

Personal protection : Personal protective equipment is not required under suitable use.
If there is a possibility of ink exposure, wear protective gloves, clothing, eye, and face protection.

Respiratory protection is not required under suitable use.

Thermal hazards are not known under suitable use.

Environmental exposure controls :

Not established

Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Black liquid

Odor : Slight

Odor threshold : No data available

pH : 8.0 - 9.0

Melting point : Less than 0°C

Freezing point : Less than 0°C

Initial boiling point : Greater than 100°C

Boiling range : Greater than 100°C

Flash point : Greater than 110°C (closed cup, ASTM D3278)

Evaporation rate : No data available

Flammability(solid/gas): Not applicable (liquid)

Upper/lower

flammability: No data available

<i>Upper/lower explosive limits :</i>	No data available
<i>Vapor pressure :</i>	No data available
<i>Vapor density :</i>	Greater than 1 (air = 1)
<i>Relative density :</i>	1.07 at 20°C
<i>Solubility(ies) :</i>	Soluble in water
<i>Partition coefficient :</i>	N-octanol/water, no data available
<i>Auto ignition temp :</i>	No data available
<i>Decomposition temp :</i>	No data available
<i>Viscosity :</i>	Less than 5 mPa-s at 20°C
<i>Explosive properties :</i>	None
<i>Oxidizing properties :</i>	None

Section 10 : Stability and reactivity

10.1 Reactivity :	Stable under normal temperature and pressure
10.2 Chemical stability :	Stable under normal temperature and pressure
10.3 Hazard reactions :	None
10.4 Conditions to avoid :	High and freezing temperatures
10.5 Incompatible materials :	Oxidizers and explosives
10.6 Hazard decomposition :	No data available

Section 11 : Toxicological information

11.1 Toxicological effects	
<i>Acute toxicity Oral LD₅₀ :</i>	>5000 mg/kg (rats)
<i>Acute toxicity Dermal LD₅₀ :</i>	>2000 mg/kg (rats)
<i>Irritation Eye :</i>	No data available
<i>Irritation Skin :</i>	No data available
<i>Corrosivity :</i>	No data available
<i>Sensitization :</i>	No data available
<i>Carcinogenicity :</i>	No data available
<i>Mutagenicity :</i>	No data available
<i>Reproduction toxicity :</i>	No data available

Section 12 : Ecological information

12.1 Toxicity :	No data available
12.2 Persistence and degradability :	No data available
12.3 Bio accumulative potential :	No data available
12.4 Mobility in soil :	No data available
12.5 PBT and vPvB assessment :	No data available
12.6 Other adverse effects :	No data available

Section 13 : Disposal considerations

13.1 Waste treatment methods :	Disposal should be in accordance with federal, state, and local requirements.
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Section 14 : Transportation information

14.1 UN number :	Not applicable
14.2 Proper shipping name :	Not applicable
14.3 Transport hazard class :	Not applicable
14.4 Packing group :	Not applicable
14.5 Environmental hazards :	Not applicable
14.6 Special precautions :	Not applicable
14.7 Bulk transport Annex II of MARPOL 73/78 and IBC Code :	Not applicable

Section 15 : Regulation information (safety, health, and environmental)

15.1 U.S. Information

<i>OSHA Inhalation Hazard :</i>	Not Regulated (29 CFR 1910.1000(d)(1)(i))
<i>TSCA Sec. 4(a) Final Test Rules :</i>	Not Regulated
<i>TSCA Sec. 5 SNUR :</i>	Not Regulated
<i>TSCA Sec.8(a) PAIR :</i>	Not Regulated
<i>TSCA Sec. 12(b) 1-time Export :</i>	Not Regulated
<i>Clean Air Act Sec. 112 HAP :</i>	TEGBE (CAS# 143-22-6)
<i>EPCRA Sec. 313 (SARA Title III) :</i>	Not Regulated
<i>NFPA Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
<i>HMIS Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
<i>California Proposition 65 :</i>	Not Regulated

15.2 Canada Information :

<i>WHMIS Controlled Product :</i>	Not applicable (manufactured article)
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15.3 Chemical safety

assessment :	Chemical safety assessment on ink has not been conducted
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Section 16 : Other information

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- 1.2 Relevant substance use: Ink for Epson
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- 1.3 Supplier details
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- Address :* 3840 Kilroy Airport Way
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United States
- Telephone :* 562.276.1369
- FAX :* 562.997.5799
- 1.4 Emergency telephone number : 562.276.1369

Section 2 : Hazard identification

- 2.1 GHS classification : Not hazardous
- 2.2 Label elements
- Symbols :* None
- Signal word :* None
- Hazard statements:* None
- Precautionary statements:* P102 Keep out of reach of children
P302+P352 IF ON SKIN: Wash with soap and water
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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Substance/Mixture : Mixture (ink composition)

Ink Composition	CAS No.	% By Weight	Remark
Water	7732-18-5	65 - 70	none
Glycerols	56-81-5	5 - 10	none
TEGBE	143-22-6	5 - 10	none
Polyethylene glycol	25322-68-3	5 - 10	none
Sodium phthalocyanine sulfonated salt	14285-61-1	5 - 10	none
Pyrrolidinone	28261-54-3	1 - 5	none
Alkane diol	160709-21-7	1 - 5	none

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4.1 Description of measures

- Eyes :* Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.
- Skin :* IF ON SKIN : Wash with soap and water. Take off contaminated. If skin irritation occurs, get medical advice/attention.
- Inhalation :* Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Ingestion :* Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important

symptoms and effects, Ink contact with skin may cause irritation, swelling, or redness.
both acute and delayed:

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

- Suitable media :* Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.
- Unsuitable media :* None

5.2 Special hazards from mixture :

None

5.3 Firefighters :

Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Non-emergency personnel :* Eye and skin protection required during clean-up. Use proper ventilation.
- Emergency responders:* None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

- Spill containment :* Use sponges to wipe-up ink.
- Spill clean-up :* Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.
- Other information :* Do not dispose of waste to sewer.

6.4 Reference to other sections : Please refer to Section 13 for disposal.

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Recommendations : Keep out of reach of children and do not drink ink.
Do not dismantle cartridge.

Occupation hygiene : Avoid contact with skin, eyes, and clothing.
In the case of skin contact, wash with soap and water.

7.2 Safe storage : Do not store cartridges in high or freezing temperatures.
Keep cartridges out of direct sunlight.
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Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

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Engineering controls : Proper ventilation

Personal protection : Personal protective equipment is not required under suitable use.
If there is a possibility of ink exposure, wear protective gloves, clothing, eye,
and face protection.

Respiratory protection is not required under suitable use.

Thermal hazards are not known under suitable use.

*Environmental exposure
controls :*

Not established

Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Cyan liquid

Odor : None

Odor threshold : No data available

pH : 9.0 - 10.0

Melting point : Less than 0°C

Freezing point : Less than 0°C

Initial boiling point : Greater than 100°C

Boiling range : Greater than 100°C

Flash point : Greater than 120°C (closed cup, ASTM D3278)

Evaporation rate : No data available

Flammability(solid/gas): Not applicable (liquid)

Upper/lower

flammability: No data available

<i>Upper/lower explosive limits :</i>	No data available
<i>Vapor pressure :</i>	No data available
<i>Vapor density :</i>	Greater than 1 (air = 1)
<i>Relative density :</i>	1.06 at 20°C
<i>Solubility(ies) :</i>	Soluble in water
<i>Partition coefficient :</i>	N-octanol/water, no data available
<i>Auto ignition temp :</i>	No data available
<i>Decomposition temp :</i>	No data available
<i>Viscosity :</i>	Less than 5 mPa-s at 20°C
<i>Explosive properties :</i>	None
<i>Oxidizing properties :</i>	None

Section 10 : Stability and reactivity

10.1 Reactivity :	Stable under normal temperature and pressure
10.2 Chemical stability :	Stable under normal temperature and pressure
10.3 Hazard reactions :	None
10.4 Conditions to avoid :	High and freezing temperatures
10.5 Incompatible materials :	Oxidizers and explosives
10.6 Hazard decomposition :	No data available

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11.1 Toxicological effects	
<i>Acute toxicity Oral LD₅₀ :</i>	>2500 mg/kg (rats)
<i>Acute toxicity Dermal LD₅₀ :</i>	>2000 mg/kg (rats)
<i>Irritation Eye :</i>	No data available
<i>Irritation Skin :</i>	No data available
<i>Corrosivity :</i>	No data available
<i>Sensitization :</i>	No data available
<i>Carcinogenicity :</i>	No data available
<i>Mutagenicity :</i>	No data available
<i>Reproduction toxicity :</i>	No data available

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12.1 Toxicity :	No data available
12.2 Persistence and degradability :	No data available
12.3 Bio accumulative potential :	No data available
12.4 Mobility in soil :	No data available
12.5 PBT and vPvB assessment :	No data available
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Section 13 : Disposal considerations

13.1 Waste treatment methods :	Disposal should be in accordance with federal, state, and local requirements.
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Section 14 : Transportation information

14.1 UN number :	Not applicable
14.2 Proper shipping name :	Not applicable
14.3 Transport hazard class :	Not applicable
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<i>EPCRA Sec. 313 (SARA Title III) :</i>	Not Regulated
<i>NFPA Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
<i>HMIS Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
<i>California Proposition 65 :</i>	Not Regulated

15.2 Canada Information :

<i>WHMIS Controlled Product :</i>	Not applicable (manufactured article)
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assessment :	Chemical safety assessment on ink has not been conducted
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P302+P352 IF ON SKIN: Wash with soap and water
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3 : Composition/information on ingredients

Substance/Mixture : Mixture (ink composition)

Ink Composition	CAS No.	% By Weight	Remark
Water	7732-18-5	60 - 65	none
Glycerols	56-81-5	5 - 10	none
Pyrrrolidinone	28261-54-3	5 - 10	none
TEGBE	143-22-6	5 - 10	none
Polyethylene glycol	25322-68-3	1 - 5	none
Methylquino acridine	10228-01-0	1 - 4	none
Carboxy sulfophenyl pyrazolone sodium salt	52126-51-9	1 - 3	none
Alkane diol	160709-21-7	1 - 2	none

Section 4 : First aid measures

4.1 Description of measures

- Eyes :* Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.
- Skin :* IF ON SKIN : Wash with soap and water. Take off contaminated. If skin irritation occurs, get medical advice/attention.
- Inhalation :* Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Ingestion :* Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important

symptoms and effects, Ink contact with skin may cause irritation, swelling, or redness.
both acute and delayed:

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

- Suitable media :* Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.
- Unsuitable media :* None

5.2 Special hazards from mixture :

None

5.3 Firefighters :

Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Non-emergency personnel :* Eye and skin protection required during clean-up. Use proper ventilation.
- Emergency responders:* None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

- Spill containment :* Use sponges to wipe-up ink.
- Spill clean-up :* Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.
- Other information :* Do not dispose of waste to sewer.

6.4 Reference to other sections : Please refer to Section 13 for disposal.

Section 7 : Handling and storage

7.1 Precautions for safe handling

Recommendations : Keep out of reach of children and do not drink ink.
Do not dismantle cartridge.

Occupation hygiene : Avoid contact with skin, eyes, and clothing.
In the case of skin contact, wash with soap and water.

7.2 Safe storage : Do not store cartridges in high or freezing temperatures.
Keep cartridges out of direct sunlight.
Do not store cartridges with oxidizing agents or explosives.
Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

Section 8 : Exposure controls / personnel protection

8.1 Control parameters : Glycerols (CAS No. 56-81-5)
ACGIH TLV-TWA 8-hour Exposure Limit is 10 mg/m³ as glycerin mist.
OSHA Z-1 PEL is 5 mg/m³ as glycerin mist, respirable fraction.
OSHA Z-1 PEL is 15 mg/m³ as glycerin mist, total dust.

8.2 Exposure controls

Engineering controls : Proper ventilation

Personal protection : Personal protective equipment is not required under suitable use.
If there is a possibility of ink exposure, wear protective gloves, clothing, eye,
and face protection.

Respiratory protection is not required under suitable use.

Thermal hazards are not known under suitable use.

*Environmental exposure
controls :*

Not established

Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Light Magenta liquid

Odor : None

Odor threshold : No data available

pH : 9.0 - 10.0

Melting point : Less than 0°C

Freezing point : Less than 0°C

Initial boiling point : Greater than 100°C

Boiling range : Greater than 100°C

Flash point : Greater than 120°C (closed cup, ASTM D3278)

Evaporation rate : No data available

Flammability(solid/gas): Not applicable (liquid)

Upper/lower

flammability: No data available

<i>Upper/lower explosive limits :</i>	No data available
<i>Vapor pressure :</i>	No data available
<i>Vapor density :</i>	Greater than 1 (air = 1)
<i>Relative density :</i>	1.07 at 20°C
<i>Solubility(ies) :</i>	Soluble in water
<i>Partition coefficient :</i>	N-octanol/water, no data available
<i>Auto ignition temp :</i>	No data available
<i>Decomposition temp :</i>	No data available
<i>Viscosity :</i>	Less than 5 mPa-s at 20°C
<i>Explosive properties :</i>	None
<i>Oxidizing properties :</i>	None

Section 10 : Stability and reactivity

10.1 Reactivity :	Stable under normal temperature and pressure
10.2 Chemical stability :	Stable under normal temperature and pressure
10.3 Hazard reactions :	None
10.4 Conditions to avoid :	High and freezing temperatures
10.5 Incompatible materials :	Oxidizers and explosives
10.6 Hazard decomposition :	No data available

Section 11 : Toxicological information

11.1 Toxicological effects	
<i>Acute toxicity Oral LD₅₀ :</i>	>5000 mg/kg (rats)
<i>Acute toxicity Dermal LD₅₀ :</i>	>2000 mg/kg (rats)
<i>Irritation Eye :</i>	No data available
<i>Irritation Skin :</i>	No data available
<i>Corrosivity :</i>	No data available
<i>Sensitization :</i>	No data available
<i>Carcinogenicity :</i>	No data available
<i>Mutagenicity :</i>	No data available
<i>Reproduction toxicity :</i>	No data available

Section 12 : Ecological information

12.1 Toxicity :	No data available
12.2 Persistence and degradability :	No data available
12.3 Bio accumulative potential :	No data available
12.4 Mobility in soil :	No data available
12.5 PBT and vPvB assessment :	No data available
12.6 Other adverse effects :	No data available

Section 13 : Disposal considerations

13.1 Waste treatment methods :	Disposal should be in accordance with federal, state, and local requirements.
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Section 14 : Transportation information

14.1 UN number :	Not applicable
14.2 Proper shipping name :	Not applicable
14.3 Transport hazard class :	Not applicable
14.4 Packing group :	Not applicable
14.5 Environmental hazards :	Not applicable
14.6 Special precautions :	Not applicable
14.7 Bulk transport Annex II of MARPOL 73/78 and IBC Code :	Not applicable

Section 15 : Regulation information (safety, health, and environmental)

15.1 U.S. Information

<i>OSHA Inhalation Hazard :</i>	Not Regulated (29 CFR 1910.1000(d)(1)(i))
<i>TSCA Sec. 4(a) Final Test Rules :</i>	Not Regulated
<i>TSCA Sec. 5 SNUR :</i>	Not Regulated
<i>TSCA Sec. 8(a) PAIR :</i>	Not Regulated
<i>TSCA Sec. 12(b) 1-time Export :</i>	Not Regulated
<i>Clean Air Act Sec. 112 HAP :</i>	TEGBE (CAS# 143-22-6)
<i>EPCRA Sec. 313 (SARA Title III) :</i>	Not Regulated
<i>NFPA Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
<i>HMIS Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
<i>California Proposition 65 :</i>	Not Regulated

15.2 Canada Information :

<i>WHMIS Controlled Product :</i>	Not applicable (manufactured article)
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15.3 Chemical safety

assessment :	Chemical safety assessment on ink has not been conducted
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Section 16 : Other information

This SDS adheres to U.S. regulatory requirements and standards and may not meet the regulatory requirements in other locations.

This is a revised Safety Data Sheet which replaces all prior U.S. SDS for this substance.

This "Safety Data Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or uses and disposal information which may accompany the substance. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. Epson does not warrant the completeness or accuracy of the information contained herein. It is subject to revision from time to time.

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Safety Data Sheet

Section 1 : Identification of substance and company undertaking

1.1 Product identifier: EPSON INK CARTRIDGE T410420

1.2 Relevant substance use: Ink for Epson Printers

1.3 Supplier details

Distributor : Epson America, Inc.

Address : 3840 Kilroy Airport Way
Long Beach, CA 90806
United States

Telephone : 562.276.1369

FAX : 562.997.5799

1.4 Emergency telephone number : 562.276.1369

Section 2 : Hazard identification

2.1 GHS classification : Not hazardous

2.2 Label elements

Symbols : None

Signal word : None

Hazard

statements: None

Precautionary

statements: P102 Keep out of reach of children
P302+P352 IF ON SKIN: Wash with soap and water
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3 : Composition/information on ingredients

Substance/Mixture : Mixture (ink composition)

Ink Composition	CAS No.	% By Weight	Remark
Water	7732-18-5	65 - 70	none
Glycerols	56-81-5	5 - 10	none
TEGBE	143-22-6	5 - 10	none
Alkane diol	160709-21-7	1 - 5	none
Pyrrolidinone	28261-54-3	1 - 3	none
Hydroxyimino methoxyphenyl butyramide	42056-95-1	1 - 3	none
Trisodium naphthalene disulfonate pyrazol salt	62609-95-4	1 - 3	none
Pyrrolidinone	28261-54-3	1 - 3	none

Section 4 : First aid measures

4.1 Description of measures

- Eyes :* Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.
- Skin :* IF ON SKIN : Wash with soap and water. Take off contaminated. If skin irritation occurs, get medical advice/attention.
- Inhalation :* Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Ingestion :* Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important

symptoms and effects, Ink contact with skin may cause irritation, swelling, or redness.
both acute and delayed:

4.3 Indication of any immediate medical attention and special treatment needed : Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

- Suitable media :* Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.
- Unsuitable media :* None

5.2 Special hazards from mixture :

None

5.3 Firefighters :

Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Non-emergency personnel :* Eye and skin protection required during clean-up. Use proper ventilation.
- Emergency responders:* None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

- Spill containment :* Use sponges to wipe-up ink.
- Spill clean-up :* Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.
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Keep cartridges out of direct sunlight.
Do not store cartridges with oxidizing agents or explosives.
Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses: Not specified

Section 8 : Exposure controls / personnel protection

8.1 Control parameters : Glycerols (CAS No. 56-81-5)
ACGIH TLV-TWA 8-hour Exposure Limit is 10 mg/m³ as glycerin mist.
OSHA Z-1 PEL is 5 mg/m³ as glycerin mist, respirable fraction.
OSHA Z-1 PEL is 15 mg/m³ as glycerin mist, total dust.

8.2 Exposure controls

Engineering controls : Proper ventilation

Personal protection : Personal protective equipment is not required under suitable use.
If there is a possibility of ink exposure, wear protective gloves, clothing, eye,
and face protection.

Respiratory protection is not required under suitable use.

Thermal hazards are not known under suitable use.

*Environmental exposure
controls :*

Not established

Section 9 : Physical and chemical properties

9.1 Physical and chemical properties

Appearance : Yellow liquid

Odor : None

Odor threshold : No data available

pH : 9.0 - 10.0

Melting point : Less than 0°C

Freezing point : Less than 0°C

Initial boiling point : Greater than 100°C

Boiling range : Greater than 100°C

Flash point : Greater than 110°C (closed cup, ASTM D3278)

Evaporation rate : No data available

Flammability(solid/gas): Not applicable (liquid)

Upper/lower

flammability: No data available

<i>Upper/lower explosive limits :</i>	No data available
<i>Vapor pressure :</i>	No data available
<i>Vapor density :</i>	Greater than 1 (air = 1)
<i>Relative density :</i>	1.06 at 20°C
<i>Solubility(ies) :</i>	Soluble in water
<i>Partition coefficient :</i>	N-octanol/water, no data available
<i>Auto ignition temp :</i>	No data available
<i>Decomposition temp :</i>	No data available
<i>Viscosity :</i>	Less than 5 mPa-s at 20°C
<i>Explosive properties :</i>	None
<i>Oxidizing properties :</i>	None

Section 10 : Stability and reactivity

10.1 Reactivity :	Stable under normal temperature and pressure
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10.3 Hazard reactions :	None
10.4 Conditions to avoid :	High and freezing temperatures
10.5 Incompatible materials :	Oxidizers and explosives
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11.1 Toxicological effects	
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<i>Corrosivity :</i>	No data available
<i>Sensitization :</i>	No data available
<i>Carcinogenicity :</i>	No data available
<i>Mutagenicity :</i>	No data available
<i>Reproduction toxicity :</i>	No data available

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12.1 Toxicity :	No data available
12.2 Persistence and degradability :	No data available
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<i>TSCA Sec. 12(b) 1-time Export :</i>	Not Regulated
<i>Clean Air Act Sec. 112 HAP :</i>	TEGBE (CAS# 143-22-6)
<i>EPCRA Sec. 313 (SARA Title III) :</i>	Not Regulated
<i>NFPA Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
<i>HMIS Hazard Rating :</i>	Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
<i>California Proposition 65 :</i>	Not Regulated

15.2 Canada Information :

<i>WHMIS Controlled Product :</i>	Not applicable (manufactured article)
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15.3 Chemical safety

assessment :	Chemical safety assessment on ink has not been conducted
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