Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-CY

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor:	Cyan liquid and characteristic odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s)	Danger
Hazard statement(s)	Combustible liquid. Causes skin irritation. May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status

This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects

Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

See section 11 for more information.

2.4. Potential environmental effects

See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Diethylene glycol diethyl ether	112-36-7	40-60	Skin Irrit. 2: H315
Tetraethylene glycol dimethyl ether	143-24-8	5-10	Repr. 1B: H360
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:

Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, CO_2 or foam.

Unsuitable extinguishing media:

No information

5.3. Protection of fire fighters

Special hazards arising from the substance or mixture

Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment

Dike spilled product.

6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information

No information

6.6. Spill or leak statements by type of chemical

Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling

Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container.

7.2. Storage

Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:

EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Cyan Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx.70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	9.5±0.5 mPa·s
Relative density:	0.945±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological Information

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation: No data available
Reference data: Moderate irritant (Diethylene glycol diethyl ether)

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitisation: No data available

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available
Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)

Carcinogenicity: None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

STOT-single exposure: Overexposure of eye may be irritating.
Overexposure of skin may cause irritation and in some people swelling and redness.
Inhalation may result in respiratory irritation and anesthesia.
Ingestion may cause an upset stomach.

STOT-repeated exposure: No data available

Aspiration hazard: No data available

12. Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in environment media: No data available

Other adverse effects: Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.

Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.

Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:

Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)

California Proposition 65: Not regulated

EU information:

Chemical Safety Assessment according to (EC)1907/2006:

This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System

Health - 1 , Flammable - 2 , Reactivity - 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.

Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-MG

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor: Magenta liquid and slight odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s): Danger

Hazard statement(s):
Combustible liquid.
Causes skin irritation.
May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status
This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects
Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

See section 11 for more information.

2.4. Potential environmental effects
See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Diethylene glycol diethyl ether	112-36-7	40-60	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous
Tetraethylene glycol dimethyl ether	143-24-8	1-5	Repr. 1B: H360

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:

Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, CO_2 or foam.

Unsuitable extinguishing media:

No information

5.3. Protection of fire fighters

Special hazards arising from the substance or mixture

Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment

Dike spilled product.

6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information

No information

6.6. Spill or leak statements by type of chemical

Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling

Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container.

7.2. Storage

Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:

EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Magenta Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx. 70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	9.5±0.5 mPa·s
Relative density:	0.948±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological Information

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation: No data available
Reference data: Moderate irritant (Diethylene glycol diethyl ether)

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitisation: No data available

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available
Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)

Carcinogenicity: None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

STOT-single exposure: Overexposure of eye may be irritating.
Overexposure of skin may cause irritation and in some people swelling and redness.
Inhalation may result in respiratory irritation and anesthesia.
Ingestion may cause an upset stomach.

STOT-repeated exposure: No data available

Aspiration hazard: No data available

12. Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in environment media: No data available

Other adverse effects: Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.

Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.

Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:

Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)

California Proposition 65: Not regulated

EU information:

Chemical Safety Assessment according to (EC)1907/2006:

This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System

Health - 1 , Flammable - 2 , Reactivity - 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.

Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-YE

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor: Yellow liquid and slight odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s): Danger

Hazard statement(s):
Combustible liquid.
Causes skin irritation.
May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status
This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects
Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	The product contains Nickel compounds. IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).

See section 11 for more information.

2.4. Potential environmental effects
See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Yellow pigment (Nickel Compounds)	C.B.I.	1-5	Not classified as hazardous
Diethylene glycol diethyl ether	112-36-7	40-60	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous
Tetraethylene glycol dimethyl ether	143-24-8	1-5	Repr. 1B: H360

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:

Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, CO_2 or foam.

Unsuitable extinguishing media:

No information

5.3. Protection of fire fighters

Special hazards arising from the substance or mixture

Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment

Dike spilled product.

6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information
No information

6.6. Spill or leak statements by type of chemical
Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling
Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container.

7.2. Storage
Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:
EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Nickel, insoluble compounds, as Ni	1mg/m^3	-
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-
Nickel, insoluble compounds, as Ni	0.1mg/m^3	-
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Yellow Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx. 70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	9.5±0.5 mPa·s
Relative density:	0.954±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological Information

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation: No data available
Reference data: Moderate irritant (Diethylene glycol diethyl ether)

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitisation: No data available

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available
Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)

Carcinogenicity: The product contains Nickel compounds.
IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).

STOT-single exposure: Overexposure of eye may be irritating.
Overexposure of skin may cause irritation and in some people swelling and redness.
Inhalation may result in respiratory irritation and anesthesia.
Ingestion may cause an upset stomach.

STOT-repeated exposure: No data available

Aspiration hazard: No data available

12. Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in environment media: No data available

Other adverse effects: Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.
Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.
Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:
Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)
Yellow pigment (Nickel Compounds) (Category Code N495)

California Proposition 65: ⚠ **WARNING:** Cancer - www.P65Warnings.ca.gov.

EU information:

Chemical Safety Assessment according to (EC)1907/2006:
This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System
Health - 1 , Flammable - 2 , Reactivity - 0
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.

Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-BK

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor: Black liquid and slight odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s)	Danger
Hazard statement(s)	Combustible liquid. Causes skin irritation. May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status
This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects
Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

See section 11 for more information.

2.4. Potential environmental effects
See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Diethylene glycol diethyl ether	112-36-7	40-60	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous
Tetraethylene glycol dimethyl ether	143-24-8	5-10	Repr. 1B: H360

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:

Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, CO_2 or foam.

Unsuitable extinguishing media:

No information

5.3. Protection of fire fighters

Special hazards arising from the substance or mixture

Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment

Dike spilled product.

6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information
No information

6.6. Spill or leak statements by type of chemical
Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling
Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container. Make sure cartridge is dry before insertion into printer housing.

7.2. Storage
Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:
EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Black Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx. 70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	10.0±0.5 mPa·s
Relative density:	0.964±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological Information

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation:	No data available Reference data: Moderate irritant (Diethylene glycol diethyl ether)
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitisation:	No data available
Germ cell mutagenicity:	No data available
Reproductive toxicity:	No data available Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)
STOT-single exposure:	Overexposure of eye may be irritating. Overexposure of skin may cause irritation and in some people swelling and redness. Inhalation may result in respiratory irritation and anesthesia. Ingestion may cause an upset stomach.
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available

12. Ecological Information

Ecotoxicity:	No data available
Persistence/Degradability:	No data available
Bioaccumulation/Accumulation:	No data available
Mobility in environment media:	No data available
Other adverse effects:	Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.

Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.

Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:

Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)

California Proposition 65: Not regulated

EU information:

Chemical Safety Assessment according to (EC)1907/2006:

This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System

Health - 1 , Flammable - 2 , Reactivity - 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.

Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-LC

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor:	Cyan liquid and slight odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s)	Danger
Hazard statement(s)	Combustible liquid. Causes skin irritation. May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status
This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects
Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

See section 11 for more information.

2.4. Potential environmental effects
See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Diethylene glycol diethyl ether	112-36-7	30-50	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous
Tetraethylene glycol dimethyl ether	143-24-8	5-10	Repr. 1B: H360

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians

May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:

Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media

Suitable extinguishing media:

Water spray, dry chemical, CO_2 or foam.

Unsuitable extinguishing media:

No information

5.3. Protection of fire fighters

Special hazards arising from the substance or mixture

Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:

Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment

Dike spilled product.

6.4. Methods for Clean-up

Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information
No information

6.6. Spill or leak statements by type of chemical
Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling
Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container. Make sure cartridge is dry before insertion into printer housing.

7.2. Storage
Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:
EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Cyan Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx. 70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	9.5±0.5 mPa·s
Relative density:	0.941±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological Information

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation: No data available
Reference data: Moderate irritant (Diethylene glycol diethyl ether)

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitisation: No data available

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available
Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)

Carcinogenicity: None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

STOT-single exposure: Overexposure of eye may be irritating.
Overexposure of skin may cause irritation and in some people swelling and redness.
Inhalation may result in respiratory irritation and anesthesia.
Ingestion may cause an upset stomach.

STOT-repeated exposure: No data available

Aspiration hazard: No data available

12. Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in environment media: No data available

Other adverse effects: Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.

Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.

Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:

Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)

California Proposition 65: Not regulated

EU information:

Chemical Safety Assessment according to (EC)1907/2006:

This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System

Health - 1 , Flammable - 2 , Reactivity - 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.

Safety Data Sheet

1. Product and Company Identification

Product name:
EcoXtreme LT Ink, AI4-LM

Manufacture:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226
Importer/Supplier:	Roland DGA Corporation
Address:	15363 Barranca Parkway Irvine, CA 92618-2201 U.S.A.
Phone:	949-727-2100
Fax:	949 727 2112
Emergency telephone:	949-727-2100
Use of the product:	Inkjet Printing
Date of issue:	29 September, 2017

2. Hazard Identification

2.1 Emergency Overview:

Appearance and odor: Magenta liquid and slight odor

This product is classified as dangerous according to GHS.

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Toxic to reproduction	Category 1B

GHS label elements, incliding precautionary statements

Pictogram

Signal word(s)	Danger
Hazard statement(s)	Combustible liquid. Causes skin irritation. May damage fertility or the unborn child

Precautionary statement(s)

Prevention	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention.
Storage	Store in a well-ventilated place. Keep cool.

2.2. OSHA regulatory status
This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.3. Potential health effects
Likely route of exposure:

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness.
Inhalation:	Exposure to vapors (mist) may be harmful to the unborn child and at the risk of impaired fertility.
Ingestion:	May cause upset stomach.
Chronic Health Hazards:	No information available.
Carcinogenicity:	None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

See section 11 for more information.

2.4. Potential environmental effects
See section 12 for Ecological information.

3. Composition/Information on Ingredients

Composition	CAS No.	% By Weight	Classification HCS
Diethylene glycol diethyl ether	112-36-7	30-50	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	C.B.I.	20-40	Not classified as hazardous
Dipropylene glycol monomethyl ether	34590-94-8	1-5	Not classified as hazardous
Tetraethylene glycol dimethyl ether	143-24-8	5-10	Repr. 1B: H360

*C.B.I.: Confidential Business Information

4. First Aid Measures

4.1. First aid procedures

Eyes:	In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.
Skin:	In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:	If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Note to physicians
May cause skin and eye irritation. Excessive inhalation of mist will cause respiratory irritation.

5. Fire Fighting Measures

5.1. Flammable properties:
Combustible liquid under Hazard Communication Standard (HCS, U.S.A).
Flash Point: approx. 70 °C or higher

5.2. Extinguishing media
Suitable extinguishing media:
Water spray, dry chemical, CO_2 or foam.
Unsuitable extinguishing media:
No information

5.3. Protection of fire fighters
Special hazards arising from the substance or mixture
Toxic and irritating fume and/or gases may generate by combustion.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus (SCBA) and full protective equipment.
Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental Release Measures

General:
Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill. Absorb spill with sand or earth then place in a chemical waste container.

6.1. Personal precautions
Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions
Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods for containment
Dike spilled product.

6.4. Methods for Clean-up
Sweep up material and dispose as waste following local regulations. Scrub contaminated area with detergent and water.

6.5. Other information
No information

6.6. Spill or leak statements by type of chemical
Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Absorb and/or contain spill with inert sand, then place in suitable container. For large spills; use water spray to disperse vapers and dilute spill to a nonflamable mixture. Do not flush to sewer. Prevent run-off from entering drains, sewers or waterways.

7. Handling And Storage

7.1. Handling

Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink. Do not dismantle container. Make sure cartridge is dry before insertion into printer housing.

7.2. Storage

Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with oxidizing agents or explosives.

8. Exposure Controls/Personal Protection

8.1. Exposure Guidelines

Occupational Exposure Limits:

EU: EU:

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

DNEL

components	Long term exposure	Short term exposure
Tetraethylene glycol dimethyl ether	22mg/m^3	-

REACH Toxicological Information (Workers - Hazard via inhalation route)

Australia: OELs

components	TWA
Dipropylene glycol monomethyl ether	308mg/m^3, 50ppm

US:

components	OSHA:PEL	ACGIH:TLV
Dipropylene glycol monomethyl ether	TWA: 600mg/m^3, 100ppm	TWA: 100ppm, 606 mg/m^3 STEL: 150ppm, 909 mg/m^3

California (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants):

components	PEL	STEL
Diethylene glycol diethyl ether	5ppm, 33mg/m^3	-
Dipropylene glycol monomethyl ether	100ppm, 600 mg/m^3	150ppm, 900 mg/m^3

8.2. Engineering controls Provide general and/or local exhaust ventilation.

8.3. Personal protective equipment (PPE)

Eye/face protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear safety glasses or chemical splash goggles.
Hand protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, use protective gloves.
Skin protection:	Not required under suitable use as setting the cartridge on the printer. However, in case of direct contact to ink, wear protective clothing.
Respiratory protection:	In case ventilation is insufficient, wear respiratory protection. Use a half facepiece respirator (with gollges) or full face-piece respirator (without googles) filtered with organic vapor cartridge.
General hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse. Do not eat, drink or smoke in handling or storage area.

9. Physical and Chemical Properties

Appearance:	Magenta Liquid
Odor:	Slight odor
Boiling point:	approx. 176 °C or higher
Flash point:	approx. 70 °C or higher
Auto-ignition temperature:	not below 220 °C
Viscosity:	9.5±0.5 mPa·s
Relative density:	0.942±0.01 (25 °C)
pH:	No data available
Solubility in Water:	No data available
Solid content:	No data available
Explosive properties:	Lower limits: 0.6 vol% Upper limits: 13.0 vol% (Diethylene glycol diethyl ether) Lower limits: 2.5 vol% Upper limits: 33.0 vol% (Dialkylene glycol dialkyl ether)
Oxidizing properties:	No data available
Vapor pressure:	No data available
Evaporation rate:	No data available
Partition coefficient: n-octanol/water:	No data available
Melting Point:	No data available
Decomposition Temperature:	No data available
Volatile organic compounds (VOC) content:	780 gram/liter (maximum value)

10. Stability and Reactivity

10.1. Reactivity:	No data available
10.2. Possibility of hazardous reactions:	Stable under normal temperature
10.3. Chemical stability:	Not expected
10.4. Conditions to avoid:	High and freezing temperatures.
10.5. Incompatible materials:	Oxidizers and explosives.
10.6. Hazardous decomposition products:	Thermal decomposition will produce oxides of carbon, copper and nitrogen.

11. Toxicological information

11.1. Information on toxicological effects

Routes of Overexposure: Eye, skin, inhalation, and oral ingestion

Acute toxicity:

1) Diethylene glycol diethyl ether	Oral LD_{50}	4970 mg/kg (Rat)
	Dermal LD_{50}	6097 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
2) Dialkylene glycol dialkyl ether	Oral LD_{50}	6000 mg/kg (Rats)
	Dermal LD_{50}	6526 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
3) Dipropylene glycol monomethyl ether	Oral LD_{50}	5130 mg/kg (Rat)
	Dermal LD_{50}	9500 mg/kg (Rabbit)
	Inhalation LC_{50}	No data available
4) Tetraethylene glycol dimethyl ether	Oral LD_{50}	5140 mg/kg (Rat)
	Dermal LD_{50}	No data available
	Inhalation LC_{50}	No data available

Skin corrosion/irritation: No data available

Reference data: Moderate irritant (Diethylene glycol diethyl ether)

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitisation: No data available

Germ cell mutagenicity: No data available

Reproductive toxicity: No data available

Suspected of damaging fertility or the unborn child.(Tetraethylene glycol dimethyl ether and a similar chemical)

Carcinogenicity: None of the ingredients in this ink is listed by IARC as a carcinogen. (1,2A and 2B)

STOT-single exposure: Overexposure of eye may be irritating.

Overexposure of skin may cause irritation and in some people swelling and redness.

Inhalation may result in respiratory irritation and anesthesia.

Ingestion may cause an upset stomach.

STOT-repeated exposure: No data available

Aspiration hazard: No data available

12. Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in environment media: No data available

Other adverse effects: Disclosure of ink and abandonment has a possibility of affecting environment. Then, cautions are required for handing. It is necessary to cope with it so that especially a product or washing water may not flow to the ground, a river, and a drain.

13. Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport Information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated
14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated
14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated
14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated
14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated
14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory Information

US Information:

Toxic Substances Control Act (TSCA): All ingredients are listed on the TSCA Inventory.
Product contains Diethylene glycol diethyl ether that is subject to TSCA Section 5 SNUR and to TSCA Section 12(b) export notification requirements.
Product contains Tetraethylene glycol dimethyl ether that is subject to TSCA Section 5 proposed SNUR and to TSCA Section 12(b) export notification requirements.

SARA TITLE III:
Section 313: Diethylene glycol diethyl ether (Chemical Category N230)
Dialkylene glycol dialkyl ether (Chemical Category N230)

California Proposition 65: Not regulated

EU information:

Chemical Safety Assessment according to (EC)1907/2006:
This product has not carried out any Chemical Safety Assessment yet.

Australia Information:

Hazardous statement: Classified as hazardous according to NOHSC criteria.

16. Other Information

NFPA 704: Hazard Rating System
Health - 1 , Flammable - 2 , Reactivity - 0
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.