Safety Data Sheet

1.Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

ECO-SOL MAX2, ESL4-WH

UFI: 16NE-QWTV-GDKS-QH35

1.2. Relevant identified uses of the substance or mixture and uses advised against

Inkjet Printing

1.3. Details of the supplier of the safety data sheet

Manufacture's name: Roland DG Corporation

Address: 1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103

Phone: + 81-53-484-1224 FAX: + 81-53-484-1226

Supplier: ROLAND DG EMEA NV

Address: BELL-TELEPHONELAAN 2G
B-2440 GEEL
BELGIUM
Phone: +32 14575911

1.4. Emergency telephone

IE	
National Poisons Information Centre	+353 18 09 25 66
Poisons Information Centre of Ireland	+353 18 37 99 64 (medical professionals) +353 18 09 21 66 (public)

2. Hazard identification

2.1. Classification of the substance or mixture

This product is classified as hazardous according to CLP criteria.

Skin irritation----------Category 2

2.2. GHS label elements, including precautionary statements

Pictgram(s)

Signal Word: Warning

Hazard Statement:

Causes skin irritation.

Supplemental hazard information:

Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Precautionary statements — Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements — Response:

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing.

Precautionary statements — Storage:

Store in a well-ventilated place. Keep cool.

T2.3. Other hazards

Eyes:	Contact with eye will be irritating.
Skin:	Contact with skin may cause irritation, swelling or redness, allergic sensitization.
Inhalation:	Exposure to vapors (mist) will cause respiratory irritation and anesthesia.
Ingestion:	May cause injury of mouth, throat, and stomach.
Chronic Health Hazards:	Repeated skin contact may cause a persistent irritation or dermatitis.
Carcinogenicity:	The product contains Titanium dioxide. IARC evaluated printing ink as a Group3(Not classifiable as to carcinogenicity to humans).
Others	No information

3. Composition/information on ingredients

Chemical nature: mixture

Composition	CAS No.	EC No.	EU registration No.	% By Weight	Classification EC No.1272/2008
Titanium dioxide	13463-67-7	236-675-5	01-2119489379-17	10-20	Not classified as hazardous
Diethylene glycol diethyl ether	112-36-7	203-963-7	01-2119969946-13	50-60	Skin Irrit. 2: H315
Dialkylene glycol dialkyl ether	CBI	CBI	01-2120283543-53	c.a. 20	Not classified as hazardous

† CBI: Confidential Business Information
‡ For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1. Description of first aid measures

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 clothingand 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. Most important symptoms and effects, both acute and delayed

Eyes: Contact with eye will be irritating.

Skin: Contact with skin may cause irritation, swelling or redness, allergic sensitization.

Inhalation: Exposure to vapors (mist) will cause respiratory irritation and anesthesia.

Ingestion: May cause injury of mouth, throat, and stomach.

4.3. Indication of any immediate medical attention and special treatment neededNo information

No information

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry chemical, Foam, Carbon dioxide, Dry sand, Loaded stream in spray.

Unsuitable extinguishing media:

Water, High-pressure water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

Flash Point: > 71deg.C

5.3. Advice for firefighters

Wear special chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA). Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues. Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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 and material for containment and cleaning up

Sweep up material and dispose as waste following local regulations.

6.4. Reference to other sections

Refer to “Section 8 Exposure controls/ personal protection” and “Section 13 Disposal consideration” as appropriate.

7. Handling and storage

7.1. Precautions for safe 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.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with metals, amines, free radical initiators, oxidising agents.

7.3. Specific end use(s):

Inkjet Printing

8. Exposure controls/ personal protection

8.1. Control parameters

Occupational Exposure Limits:

Derived No-Effect Level (DNEL)

— Titanium dioxide:

[Long term exposure] no hazard identified

[Short term exposure] no hazard identified

— Diethylene glycol diethyl ether:
[Long term exposure] 50.05 mg/m³
[Short term exposure] no hazard identified

8.2. Exposure controls

Appropriate engineering controls
Provide general and/or local exhaust ventilation.

Respiratory protection:
Not requiredwhen sufficient ventilation is provided. In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

Hand protection:
Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, use protective gloves. Recommended impervious gloves is EN420/374 approved butyl rubber glove.

Eye protection:
Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear EN166 approved safety glasses.

Skin protection:
Not required under suitable use as setting the ink on the printer. However, in case of direct contact to the ink, wear protective clothing.

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.

Environmental exposure control:
Avoid release to the environment.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:---------- Physical state: liquidColour: white
Odour:---------- slight odor
Odour threshold:---------- Not defined
pH:----------Not applicable
Melting point/freezing point:----------No data available
Initial boiling point and boiling range:---------- No data available
Flash point:---------- > 71 °C

Evaporation rate:----------No data available
Flammability (solid, gas):----------Not applicable
Upper/lower flammability or explosive limits:---- No data available
Vapor pressure:----------No data available
Vapor density:---------- No data available
Relative density:---------- 1.0-1.1
Solubility(ies):----------Water solubility: Slightly soluble
Partition coefficient: n-octanol/water:---------- No data available
Auto-ignition temperature:----------No data available
Decomposition temperature:----------No data available
Viscosity:---------- No data available
Explosive properties:---------- No data available
Oxidizing properties:---------- No data available

9.2. Other information----------No data available

10. Stability and reactivity

10.1. Reactivity:

No reactivity under normal temperature.

10.2. Chemical stability:

Stable under normal temperature.

10.3. Possibility of hazardous reactions:

Not expected.

10.4. Conditions to avoid:

Elevated temperatures/heat, UV light, when not in use.

10.5. Incompatible materials:

Avoid contact with acids, amines, free radical initiators, oxidizing agents.

10.6. Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity: None of the ingredients in this ink is classified as acute toxicant.

Serious eye damage/eye irritation:

no data available.

Skin corrosion/irritation:

Causes skin irritation.

• Diethylene glycol diethyl ether

Respiratory or skin sensitisation:

no data available.

Germ cell mutagenicity:

no data available.

Reproductive toxicity:

no data available.

Carcinogenicity:

This product contains Titanium dioxide.

IARC evaluated printing ink as a Group 3.

(IARC Group 3: Not classifiable as to carcinogenicity to humans)

Specific target organ toxicity - single exposure, (STOT-SE):

no data available.

Specific target organ toxicity - repeat exposure, (STOT-RE):

no data available.

Aspiration hazard:

no data available.

12. Ecological information

12.1. Toxicity: No data available.

12.2. Persistence and degradability:

No data available

12.3. Bioaccumulative potential:

No data available

12.4. Mobility in soil:

No data available

12.5. Results of PBT and vPvB assessment:

Has not carried out PBT and vPvB assessment.

12.6. Other adverse effects:

No data available

13. Disposal considerations

13.1. Waste treatment methods

Product:	Dispose as hazardous waste. Packaging with product residues must be disposed of under the same conditions as the product itself.
Recommended waste code:	08 03 12* (waste ink containing dangerous substances)
Uncleaned packaging:	15 01 10* (packaging, the residues of dangerous substances or hazardous waste contain or are contaminated by dangerous substances or special wastes)
Recommendation:	Uncontaminated packaging can be recycled. Non-cleanable packaging must be disposed of in the same way as the substance.

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

ADR/ADG/DOT, IMDG, or IATA : 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

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

(EC) No 1907/2006 Authorisation:	Not regulated
(EC) No 1907/2006 SVHC:	Not regulated
(EC) No 1005/2009:	Not regulated
(EC) No 850/2004:	Not regulated
(EU) No 649/2012:	Not regulated

15.2. Chemical safety assessment

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

16. Other Information

List of relevant H-Statements:

List of relevant H-Statements:

— H315: Causes skin irritation.

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.