

SAFETY DATA SHEET

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issue Date 15-Aug-2016

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Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name Emerald E12-ESM Magenta

Contains Butoxyethyl acetate, gamma-Butyrolactone

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

Recommended Use Digital Printing

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer NUTEC DIGITAL INK (PTY) LTD. 1 CLIFFORD STREET OTTERY, 7800 SOUTH AFRICA
For further information, please contact

Contact Point Regulatory Department

1.4. Emergency telephone number

Emergency Telephone During normal opening times: +27 21 763 6990
24 Hours: +27 83 326 0774

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Specific target organ toxicity (single exposure)	Category 3 - (H335,H336)

Classification according to Directive 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

Hazard symbols

Xn - Harmful

R-code(s)

Xn;R22 - Xi;R36/37/38 - Xi;R41 - R67

2.2. Label elements

Product identifier

Contains Butoxyethyl acetate, gamma-Butyrolactone



Signal word

Danger

Hazard statements

H332 - Harmful if inhaled

H315 - Causes skin irritation

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Dipropylene glycol dimethyl ether	404-640-5	111109-77-4	<55	Xi;R36/37/38	Skin Irrit. 2 (H315) Eye Irrit. (H319) STOT SE 3 (H335)	No data available
gamma-Butyrolactone	202-509-5	96-48-0	<30	Xn;R22 Xi; R41 R67	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)	No data available
Dipropylene Glycol Dimethyl Ether	252-104-2	34590-94-8	<20	-	No data available	No data available
Butoxyethyl acetate	203-933-3	112-07-2	<10	Xn; R20/21	Acute Tox. 4 (H312) Acute Tox. 4 (H332)	No data available

Full text of R-phrases: see section 16**Full text of H- and EUH-phrases: see section 16****Section 4: FIRST AID MEASURES****4.1. Description of first aid measures****General advice**

If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Inhalation

Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Consult a physician if necessary. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.

Eye contact

Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion

Rinse mouth. Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider

Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed**Symptoms**

No information available.

4.3. Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures**Personal precautions**

Evacuate personnel to safe areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Soak up with inert absorbent material. Dam up.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE**7.1. Precautions for safe handling****Advice on safe handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Incompatible materials

None known based on information supplied.

7.3. Specific end use(s)**Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Dipropylene Glycol Dimethyl Ether 34590-94-8	TWA 50 ppm TWA 308 mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm STEL: 924 mg/m ³ Sk*	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ via dérmica*	TWA: 50 ppm TWA: 310 mg/m ³
Butoxyethyl acetate 112-07-2	TWA 20 ppm TWA 133 mg/m ³ STEL 50 ppm STEL 333 mg/m ³ *	TWA: 20 ppm TWA: 133 mg/m ³ STEL: 50 ppm STEL: 332 mg/m ³ Sk*	TWA: 10 ppm TWA: 66.5 mg/m ³ STEL: 50 ppm STEL: 333 mg/m ³ *	TWA: 20 ppm TWA: 133 mg/m ³ STEL: 50 ppm STEL: 333 mg/m ³ via dérmica*	TWA: 20 ppm TWA: 130 mg/m ³ H*
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
gamma-Butyrolactone 96-48-0	-	-	-	TWA: 50 ppm TWA: 14 mg/m ³ STEL: 250 ppm STEL: 70 mg/m ³ iho*	-
Dipropylene Glycol Dimethyl Ether 34590-94-8	TWA: 50 ppm TWA: 308 mg/m ³ pelle*	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm P*	TWA: 300 mg/m ³	TWA: 50 ppm TWA: 310 mg/m ³ iho*	TWA: 50 ppm TWA: 309 mg/m ³ H*
Butoxyethyl acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m ³ STEL: 50 ppm STEL: 333 mg/m ³	TWA: 20 ppm TWA: 133 mg/m ³ STEL: 50 ppm STEL: 333 mg/m ³	TWA: 135 mg/m ³ STEL: 333 mg/m ³ H*	TWA: 20 ppm TWA: 130 mg/m ³ STEL: 50 ppm STEL: 330 mg/m ³	TWA: 20 ppm TWA: 134 mg/m ³ H*

	pelle*	P*		iho*	
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Dipropylene Glycol Dimethyl Ether 34590-94-8	TWA: 50 ppm TWA: 307 mg/m ³ STEL 100 ppm STEL 614 mg/m ³ H*	TWA: 50 ppm TWA: 300 mg/m ³ STEL: 50 ppm STEL: 300 mg/m ³ H*	STEL: 480 mg/m ³ TWA: 240 mg/m ³	TWA: 50 ppm TWA: 300 mg/m ³ STEL: 50 ppm STEL: 300 mg/m ³ H*	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm STEL: 924 mg/m ³ Sk*
Butoxyethyl acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m ³ STEL 40 ppm STEL 270 mg/m ³ H*	TWA: 10 ppm TWA: 66 mg/m ³ STEL: 20 ppm STEL: 132 mg/m ³ H*	STEL: 300 mg/m ³ TWA: 100 mg/m ³	TWA: 10 ppm TWA: 65 mg/m ³ STEL: 10 ppm STEL: 65 mg/m ³ H*	TWA: 20 ppm TWA: 133 mg/m ³ STEL: 50 ppm STEL: 333 mg/m ³ Sk*

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Butoxyethyl acetate 112-07-2	-	-	-	-	100 mg/L 200 mg/L
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Butoxyethyl acetate 112-07-2	-	100 200	-	-	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.
Skin and body protection Suitable protective clothing. Apron. Gloves made of plastic or rubber.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Odor	Characteristic
Appearance	Liquid	Odor threshold	No information available
Color	Magenta		
Property	Values	Remarks • Method	
pH		No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range	175 °C / 347 °F	No information available	
Flash point	68 °C / 149 °F	No information available	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Flammability Limit in Air			
Upper flammability limit:		No information available	
Lower flammability limit:		No information available	
Vapor pressure		No information available	
Vapor density		No information available	
Relative density		No information available	
Water solubility	Immiscible in water	No information available	
Solubility(ies)		No information available	
Partition coefficient		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Kinematic viscosity		No information available	
Dynamic viscosity		No information available	
Explosive properties	Not an explosive		
Oxidizing properties	Not applicable		

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity**

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions**Possibility of Hazardous Reactions**

None under normal processing.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity****Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,711.00 mg/kg
ATEmix (dermal)	6,754.00 mg/kg
ATEmix (inhalation-dust/mist)	7.90 mg/l
ATEmix (inhalation-vapor)	16.00 mg/l

Unknown acute toxicity

- 90.75249999 % of the mixture consists of ingredient(s) of unknown toxicity.
- 47.78099999 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 47.78099999 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 67.33249999 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

90.75249999 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
67.33249999 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
gamma-Butyrolactone	= 1540 mg/kg (Rat)		> 5100 mg/m ³ (Rat) 4 h
Dipropylene Glycol Dimethyl Ether	= 5400 µL/kg (Rat)	= 9500 mg/kg (Rabbit)	
Butoxyethyl acetate	= 2400mg/kg (Rat)	= 1500 mg/kg (Rabbit)	

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	blood, Central nervous system, Eyes, Hematopoietic System, kidney, liver, Respiratory system, Skin.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Unknown aquatic toxicity 52.63052 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
52.63052 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
gamma-Butyrolactone	360: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	220 - 460: 96 h <i>Leuciscus idus</i> mg/L LC50 static	500: 48 h <i>Daphnia magna</i> Straus mg/L EC50
Dipropylene Glycol Dimethyl Ether	-	10000: 96 h <i>Pimephales promelas</i> mg/L LC50 static	1919: 48 h <i>Daphnia magna</i> mg/L LC50
Butoxyethyl acetate	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	-	37: 48 h <i>Daphnia magna</i> mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
gamma-Butyrolactone	-0.566
Dipropylene Glycol Dimethyl Ether	-0.064
Butoxyethyl acetate	1.51

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION**IMDG**

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable

14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

Chemical Name	French RG number	Title
Dipropylene glycol dimethyl ether 111109-77-4	RG 84	-
gamma-Butyrolactone 96-48-0	RG 84	-
Dipropylene Glycol Dimethyl Ether 34590-94-8	RG 84	-
Butoxyethyl acetate 112-07-2	RG 84	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

All of the components in the product are on the following Inventory lists No information available.

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of R-phrases referred to under sections 2 and 3

R67 - Vapors may cause drowsiness and dizziness
 R41 - Risk of serious damage to eyes
 R22 - Harmful if swallowed
 R36/37/38 - Irritating to eyes, respiratory system and skin
 R20/21 - Harmful by inhalation and in contact with skin

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H312 - Harmful in contact with skin
 H332 - Harmful if inhaled
 H302 - Harmful if swallowed
 H318 - Causes serious eye damage
 H336 - May cause drowsiness or dizziness

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

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Revision Note Not applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet