

# 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 11-Nov-2016

Revision Date 11-Nov-2016

Version 1

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

### 1.1. Product identifier

Product Name Emerald E12-MVJ Black

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

### 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
Black Pigment	Listed	-	<5	-	No data available	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.

<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Self-protection of the first aider</b>	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 <sup>3</sup> *	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> STEL: 150 ppm STEL: 924 mg/m <sup>3</sup> Sk*	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> *	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> vía dérmica*	TWA: 50 ppm TWA: 310 mg/m <sup>3</sup>
Butoxyethyl acetate 112-07-2	TWA 20 ppm TWA 133 mg/m <sup>3</sup> STEL 50 ppm STEL 333 mg/m <sup>3</sup> *	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 332 mg/m <sup>3</sup> Sk*	TWA: 10 ppm TWA: 66.5 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> *	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> vía dérmica*	TWA: 20 ppm TWA: 130 mg/m <sup>3</sup> H*
Black Pigment	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
gamma-Butyrolactone 96-48-0	-	-	-	TWA: 50 ppm TWA: 14 mg/m <sup>3</sup> STEL: 250 ppm STEL: 70 mg/m <sup>3</sup> iho*	-
Dipropylene Glycol Dimethyl Ether 34590-94-8	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> pelle*	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> STEL: 150 ppm P*	TWA: 300 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 310 mg/m <sup>3</sup> iho*	TWA: 50 ppm TWA: 309 mg/m <sup>3</sup> H*
Butoxyethyl acetate	TWA: 20 ppm	TWA: 20 ppm	TWA: 135 mg/m <sup>3</sup>	TWA: 20 ppm	TWA: 20 ppm

112-07-2	TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> pelle*	TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> P*	STEL: 333 mg/m <sup>3</sup> H*	TWA: 130 mg/m <sup>3</sup> STEL: 50 ppm STEL: 330 mg/m <sup>3</sup> iho*	TWA: 134 mg/m <sup>3</sup> H*
Black Pigment	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
<b>Chemical Name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
Dipropylene Glycol Dimethyl Ether 34590-94-8	TWA: 50 ppm TWA: 307 mg/m <sup>3</sup> STEL 100 ppm STEL 614 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 300 mg/m <sup>3</sup> STEL: 50 ppm STEL: 300 mg/m <sup>3</sup>	STEL: 480 mg/m <sup>3</sup> TWA: 240 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 300 mg/m <sup>3</sup> STEL: 50 ppm STEL: 300 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 308 mg/m <sup>3</sup> STEL: 150 ppm STEL: 924 mg/m <sup>3</sup> Sk*
Butoxyethyl acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL 40 ppm STEL 270 mg/m <sup>3</sup> H*	TWA: 10 ppm TWA: 66 mg/m <sup>3</sup> STEL: 20 ppm STEL: 132 mg/m <sup>3</sup> H*	STEL: 300 mg/m <sup>3</sup> TWA: 100 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 65 mg/m <sup>3</sup> STEL: 10 ppm STEL: 65 mg/m <sup>3</sup> H*	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> Sk*
Black Pigment	-	-	TWA: 4.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>

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

<b>Physical state</b>	liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Liquid	<b>Odor threshold</b>	No information available
<b>Color</b>	black		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range	175 °C / 347 °F	No information available	
Flash point	65 °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	

<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	Not an explosive
<b>Oxidizing properties</b>	Not applicable

**9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	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.

<b>Inhalation</b>	No data available.
<b>Eye contact</b>	No data available.
<b>Skin contact</b>	No data available.
<b>Ingestion</b>	No data available.

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

<b>ATEmix (oral)</b>	2,767.00 mg/kg
<b>ATEmix (dermal)</b>	7,410.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	8.66 mg/l

**ATEmix (inhalation-vapor)** 15.00 mg/l

**Unknown acute toxicity**

92.15149999 % of the mixture consists of ingredient(s) of unknown toxicity.

48.79149999 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

48.79149999 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

66.79149999 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

92.15149999 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

66.79149999 % 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 <sup>3</sup> ( Rat ) 4 h
Dipropylene Glycol Dimethyl Ether	= 5400 µL/kg ( Rat )	= 9500 mg/kg ( Rabbit )	
Butoxyethyl acetate	= 2400mg/kg ( Rat )	= 1500 mg/kg ( Rabbit )	
Black Pigment	> 15400 mg/kg ( Rat )	> 3 g/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, Lymphatic System, Respiratory system, Skin.

**Aspiration hazard** No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Unknown aquatic toxicity 55.872 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

55.872 % 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
Black Pigment	10000 mg/l / 3 d <i>scenedesmus subspicatus</i>	1000 mg/l / 96 h <i>Brachydanio rerio</i> )	5600: 24 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

**France****Occupational Illnesses (R-463-3, France)**

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	-
Black Pigment	RG 16, RG 16bis	-

**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  
 R11 - Highly flammable

R63 - Possible risk of harm to the unborn child  
R38 - Irritating to skin  
R65 - Harmful: may cause lung damage if swallowed  
R36/37/38 - Irritating to eyes, respiratory system and skin  
R20/21 - Harmful by inhalation and in contact with skin  
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

**Full text of H-Statements referred to under section 3**

H315 - Causes skin irritation  
H361d - Suspected of damaging the unborn child  
H336 - May cause drowsiness or dizziness  
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled  
H304 - May be fatal if swallowed and enters airways  
H225 - Highly flammable liquid and vapor  
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

**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

<b>Issue Date</b>	11-Nov-2016
<b>Revision Date</b>	11-Nov-2016
<b>Revision Note</b>	Not applicable.

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

**End of Safety Data Sheet**