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 03-Jul-2015 **Revision Date** 03-Jul-2015 **Version** 1

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

1.1. Product identifier

Product Name Sapphire S10 Magenta-R

Contains Butoxyethyl acetate, γ-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)
Serious eye damage/eye irritation	Category 1 - (H318)
Specific target organ toxicity (single exposure)	Category 3 - (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;R20/21 - Xi;R41

2.2. Label elements

Product identifier
Contains Butoxyethyl acetate, γ-Butyrolactone

Signal word
Danger

Hazard statements
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
EUH210 - Safety data sheet available on request

Precautionary Statements - EU (§28, 1272/2008)
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
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

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
Butoxyethyl acetate	203-933-3	112-07-2	<80	Xn; R20/21	Acute Tox. 4 (H312) Acute Tox. 4 (H332)	No data available
γ-Butyrolactone	202-509-5	96-48-0	<20	Xn;R22 Xi; R41 R67	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)	No data available
Diethylene glycol diethyl ether	203-963-7	112-36-7	<10	Xi;R36	Eye Irrit. 2 (H319)	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. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Skin contact Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is not required. If skin irritation persists, call a physician.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. 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. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. 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. Dry chemical. Carbon dioxide (CO2). Water spray (fog). Alcohol resistant foam.

Unsuitable extinguishing media
No information available

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition Risk of ignition

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
Use personal protective equipment as required. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. 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 Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover

powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up. Take precautionary measures against static discharges.

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
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. 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. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

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 away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Keep away from heat.

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
Butoxyethyl acetate 112-07-2	TWA 20 ppm TWA 133 mg/m³ STEL 50 ppm STEL 333 mg/m³ *	TWA: 20 ppm TWA: 133 mg/m³ STEL: 50 ppm STEL: 332 mg/m³ Sk*	TWA: 10 ppm TWA: 66.5 mg/m³ STEL: 50 ppm STEL: 333 mg/m³ *	TWA: 20 ppm TWA: 133 mg/m³ STEL: 50 ppm STEL: 333 mg/m³ vía dérmica*	TWA: 20 ppm TWA: 130 mg/m³ H*
Chemical Name	**Italy**	**Portugal**	**Netherlands**	**Finland**	**Denmark**
Butoxyethyl acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m³ STEL: 50 ppm STEL: 333 mg/m³ pelle*	TWA: 20 ppm TWA: 133 mg/m³ STEL: 50 ppm STEL: 333 mg/m³ P*	TWA: 135 mg/m³ STEL: 333 mg/m³ H*	TWA: 20 ppm TWA: 130 mg/m³ STEL: 50 ppm STEL: 330 mg/m³ iho*	TWA: 20 ppm TWA: 134 mg/m³ H*
γ-Butyrolactone 96-48-0	-	-	-	TWA: 50 ppm TWA: 14 mg/m³ STEL: 250 ppm STEL: 70 mg/m³ iho*	-
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Butoxyethyl acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m³ STEL 40 ppm STEL 270 mg/m³ H*	TWA: 10 ppm TWA: 66 mg/m³ STEL: 20 ppm STEL: 132 mg/m³ H*	STEL: 300 mg/m³ TWA: 100 mg/m³	TWA: 10 ppm TWA: 65 mg/m³ STEL: 20 ppm STEL: 97.5 mg/m³ H*	TWA: 20 ppm TWA: 133 mg/m³ STEL: 50 ppm STEL: 333 mg/m³ 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. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate. Antistatic footwear.

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

Appearance Liquid

Color Magenta

Odor Characteristic

Odor threshold No information available

Property	Values	Remarks • Method
pH		No information available
Melting point / freezing point		No information available
Boiling point / boiling range	184 °C / 363 °F	
Flash point	78 °C / 172 °F	
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		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	No information available	
Oxidizing properties	No information available	

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

Heat, flames and sparks.

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) 7,246.00 mg/kg
ATEmix (dermal) 2,098.00 mg/kg ppm mg/l
ATEmix (inhalation-vapor) 11.46 mg/l

Unknown acute toxicity

26.79959% of the mixture consists of ingredient(s) of unknown toxicity.
2.68981 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
2.68981 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
6.27359 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
26.79959 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
6.26481 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Butoxyethyl acetate	= 2400mg/kg (Rat)	= 1500 mg/kg (Rabbit)	
γ-Butyrolactone	= 1540 mg/kg (Rat)		> 5100 mg/m³ (Rat) 4 h

Diethylene glycol diethyl ether	= 4970 mg/kg (Rat)	= 6700 µL/kg (Rabbit)	
2-Butoxyethanol	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Toluene	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h

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 6.26482 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

6.26482 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
γ-Butyrolactone	360: 72 h Desmodesmus subspicatus mg/L EC50	-	500: 48 h Daphnia magna Straus mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Butoxyethyl acetate	1.51
γ-Butyrolactone	-0.566

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
Butoxyethyl acetate 112-07-2	RG 84	-
γ-Butyrolactone 96-48-0	RG 84	-
Diethylene glycol diethyl ether 112-36-7	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

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

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 - Irritating to eyes
R20/21 - Harmful by inhalation and in contact with skin

Full text of H-Statements referred to under section 3

H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
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

Issue Date	03-Jul-2015
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Revision Note	Not applicable.

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

End of Safety Data Sheet