SAFETY DATA SHEET

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

1.1 Product identifier

Product code **G100SSFFC2**

Product name **Flush**

Product category **Mssjet Ink**

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

Recommended use Industrial Printing Operations

1.3 Details of the supplier of the safety data sheet

Guillen Comunicacion Visual
P.I. Base 2000. /5 Nave 4
Lorqui, Murcia
Espana / Spain
Tel: 00 34 968 93 6400

For further information, please contact

Contact person

E-mail address

1.4 Emergency telephone number

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 1 - (H318)

2.2 Label elements

Signal Word
Danger

Hazard Statements
H318 - Causes serious eye damage
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P280 - Wear protective gloves/protective clothing/eye protection/face protection

2.3 Other Hazards

General Hazards No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Component	EC No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH No.	Note
Ethyl 3-ethoxypropionate	212-112-9	763-69-9	60 - 80	Flam. Liq. 3 (H226) (EUH066)	01-2119463267-34-xxxx	1
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	10 - 30	Acute Tox. 4 (H312) Acute Tox. 4 (H332)	01-2119475112-47-xxxx	1
Butyrolactone	202-509-5	96-48-0	10 - 30	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)	01-2119471839-21-xxxx	1

Note
REACH No: Registration number(s) may not be provided because substance(s) are exempted or not yet required to be registered under REACH
1. Substance with a Community workplace exposure limit

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

Inhalation Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

None under normal use conditions.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media
Foam. Carbon dioxide (CO2). Dry chemical. Water spray. 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 gases and vapors. May emit toxic fumes under fire conditions.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

6.4 Reference to other sections

See Section 12 for more information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

7.3 Specific end use(s)

Exposure scenario No information available.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

Component	**European Union**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin
Component	**The United Kingdom**
Ethylene glycol monobutyl ether acetate 112-07-2	STEL: 50 ppm STEL: 332 mg/m^3 TWA: 20 ppm

	TWA: 133 mg/m^3 Skin
Component	**France**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VME: 10 ppm indicative limit TWA/VME: 66.5 mg/m^3 indicative limit STEL/VLCT: 50 ppm restrictive limit STEL/VLCT: 333 mg/m^3 restrictive limit Skin
Component	**Germany**
Ethyl 3-ethoxypropionate 763-69-9	TWA/MAK: 100 ppm TWA/MAK: 610 mg/m^3 TWA/AGW: 100 ppm TWA/AGW: 610 mg/m^3 Peak: 100 ppm Peak: 610 mg/m^3 Skin
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/MAK: 10 ppm TWA/MAK: 66 mg/m^3 TWA/AGW: 10 ppm TWA/AGW: 65 mg/m^3 Peak: 20 ppm Peak: 132 mg/m^3 Skin
Butyrolactone 96-48-0	Skin
Component	**Spain**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VLA-ED: 20 ppm TWA/VLA-ED: 133 mg/m^3 STEL/VLA-EC: 50 ppm STEL/VLA-EC: 333 mg/m^3 Skin
Component	**Italy**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin
Component	**Portugal**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VLE-MP: 20 ppm TWA/VLE-MP: 133 mg/m^3 STEL/VLE-CD: 50 ppm STEL/VLE-CD: 333 mg/m^3 Skin
Component	**The Netherlands**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 135 mg/m^3 STEL: 333 mg/m^3 Skin
Component	**Finland**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 130 mg/m^3 STEL: 50 ppm STEL: 330 mg/m^3 Skin
Butyrolactone 96-48-0	TWA: 50 ppm TWA: 14 mg/m^3 STEL: 250 ppm STEL: 70 mg/m^3 Skin
Component	**Denmark**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 134 mg/m^3 Skin
Component	**Austria**
Ethyl 3-ethoxypropionate 763-69-9	STEL/KZGW: 100 ppm STEL/KZGW: 610 mg/m^3 TWA/TMW: 100 ppm

	TWA/TMW: 610 mg/m^3 Ceiling: 100 ppm Ceiling: 610 mg/m^3 Skin
Ethylene glycol monobutyl ether acetate 112-07-2	STEL/KZGW: 40 ppm STEL/KZGW: 270 mg/m^3 TWA/TMW: 20 ppm TWA/TMW: 133 mg/m^3 Skin
Component	**Switzerland**
Ethyl 3-ethoxypropionate 763-69-9	TWA/MAK: 100 ppm TWA/MAK: 610 mg/m^3 STEL/KZW: 100 ppm STEL/KZW: 610 mg/m^3 Skin
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/MAK: 10 ppm aerosol, vapour TWA/MAK: 66 mg/m^3 aerosol, vapour STEL/KZW: 20 ppm aerosol, vapour STEL/KZW: 132 mg/m^3 aerosol, vapour Skin
Component	**Poland**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/NDS: 100 mg/m^3 STEL/NDSCh : 300 mg/m^3
Component	**Norway**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 10 ppm TWA: 65 mg/m^3 Skin
Component	**Ireland**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m^3 STEL: 50 ppm STEL: 333 mg/m^3 Skin

Component	**Australia TWA**
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m^3
Component	**Australia STEL**
Ethylene glycol monobutyl ether acetate 112-07-2	STEL: 50 ppm STEL: 333 mg/m^3

Derived No Effect Level (DNEL) .

Component	**DNEL - Dermal (Workers)**	**DNEL - Inhalation (Workers)**
Ethyl 3-ethoxypropionate 763-69-9	102 mg/kg (Systemic long term) 102 mg/cm3 (Systemic long term)	610 mg/m^3 (Systemic long term) 610 mg/m^3 (Local long term)
Ethylene glycol monobutyl ether acetate 112-07-2	169 mg/kg (Systemic long term) 120 mg/kg (Systemic acute/short term)	133 mg/m^3 (Systemic long term) 333 mg/m^3 (Local acute/short term)
Butyrolactone 96-48-0	19 mg/kg (Systemic long term)	130 mg/m^3 (Systemic long term) 958 mg/m^3 (Systemic acute/short term)

Predicted No Effect Concentration (PNEC) No information available.

8.2 Exposure controls

Engineering Measures Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In

case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles). If splashes are likely to occur:. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye Protection Safety glasses with side-shields. Goggles. Face-shield. Avoid contact with eyes. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hand Protection Chemical resistant protective gloves.
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time): eg. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers. Taking into account the varying conditions, the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Due to different glove types, the manufacturer's directions for use should be observed. Replace gloves immediately when torn or any change in appearance is noticed such as dimension, color, flexibility.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	Liquid	**Color**	Water-white
Odor	No information available		

Property	**Values**	**Remarks • Method**
Melting Point / Freezing Point		No data available
Boiling Point / Boiling Range	> 149 °C / 300 °F	
Flammability Limit in Air		
Upper flammability limit		No data available
Lower flammability limit		No data available
Flash Point	64 °C / 147 °F	
Autoignition Temperature		No data available
Decomposition temperature		No data available
pH		No data available
Kinematic viscosity		No data available
Water Solubility		No data available

Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Vapor Pressure		No data available
Specific Gravity	0.97	
Vapor Density		No data available

9.2 Other information

Explosive Properties	No data available
Oxidizing Properties	No data available

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of Hazardous Reactions

None under normal processing.

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO2). Carbon monoxide.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Unknown Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.

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

ATEmix (oral)	10,267.00
ATEmix (dermal)	6,000.00
ATEmix (inhalation-dust/mist)	6.00
ATEmix (inhalation-vapor)	44.00

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component	Oral LD50
Ethyl 3-ethoxypropionate 763-69-9	= 5 g/kg (Rat)
Ethylene glycol monobutyl ether acetate 112-07-2	= 2400 mg/kg (Rat)
Butyrolactone 96-48-0	= 1540 mg/kg (Rat)

Component	Dermal LD50
Ethyl 3-ethoxypropionate 763-69-9	> 9500 mg/kg (Rabbit)
Ethylene glycol monobutyl ether acetate 112-07-2	= 1500 mg/kg (Rabbit)
Butyrolactone 96-48-0	> 5640 mg/kg (Rabbit)

Component	Inhalation LC50
Ethyl 3-ethoxypropionate 763-69-9	> 5.96 mg/L (Rat) 6 h
Ethylene glycol monobutyl ether acetate 112-07-2	> 400 ppm (Rat) 4 h
Butyrolactone 96-48-0	> 5100 mg/m^3 (Rat) 4 h

Skin corrosion/irritation Specific test data for the substance or mixture is not available.
Eye damage/irritation Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components).
Sensitization Specific test data for the substance or mixture is not available.
Mutagenic Effects Specific test data for the substance or mixture is not available.
Carcinogenic effects Specific test data for the substance or mixture is not available.
Reproductive Effects Specific test data for the substance or mixture is not available.

STOT - single exposure Specific test data for the substance or mixture is not available.
STOT - repeated exposure Specific test data for the substance or mixture is not available.
Aspiration hazard Specific test data for the substance or mixture is not available.

11.2 Information on other hazards

No information available

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Specific test data for the substance or mixture is not available.

Unknown Aquatic Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
Ethylene glycol monobutyl ether acetate 112-07-2	72h EC50 Desmodesmus subspicatus: > 500 mg/L
Butyrolactone 96-48-0	96h EC50 Desmodesmus subspicatus: = 79 mg/L 72h EC50 Desmodesmus subspicatus: = 360 mg/L

Component	Fish
Ethyl 3-ethoxypropionate 763-69-9	96h LC50 Pimephales promelas: = 62 mg/L (static)
Ethylene glycol monobutyl ether acetate	96h LC50 Oncorhynchus mykiss: 20 - 40 mg/L

112-07-2	
Butyrolactone 96-48-0	96h LC50 Lepomis macrochirus: = 56 mg/L (static)

Component	Crustacea
Ethyl 3-ethoxypropionate 763-69-9	48h EC50 Daphnia magna: = 970 mg/L
Ethylene glycol monobutyl ether acetate 112-07-2	48h EC50 Daphnia magna: = 37 mg/L
Butyrolactone 96-48-0	48h EC50 Daphnia magna Straus: > 500 mg/L

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available

Component	Partition coefficient
Ethyl 3-ethoxypropionate 763-69-9	1.35
Ethylene glycol monobutyl ether acetate 112-07-2	1.51
Butyrolactone 96-48-0	-0.566

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties.

This product does not contain any known or suspected endocrine disruptors.

12.7 Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues/unused products Contain and dispose of waste according to local regulations.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: TRANSPORT INFORMATION

Note: This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

ADR Not Regulated

ICAO / IATA / IMDG / IMO Not Regulated

Section 15: REGULATORY INFORMATION

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

European Union

International Inventories
For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor)

Regulation (EC) No. 1907/2006 (REACH), Article 57
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

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 H-Statements referred to under sections 2 and 3
EUH066 - Repeated exposure may cause skin dryness or cracking
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Revision Date Apr-13-2022

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

Disclaimer
The information provided in this Safety Data Sheet is 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.

End of Safety Data Sheet