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

### 1.1 Product identifier

Product code **24675**  
 Product name **Flush**  
 Product category **Optimizer IV Eco Solvent Ink for Roland XR, XF, RF, VS-i Series**

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

Recommended use Printing operations

### 1.3 Details of the supplier of the safety data sheet

DATAPLOT GmbH  
 Gutenbergstraße 15  
 D-24558 Henstedt-Ulzburg  
 Germany  
 Tel.: +49 4193-9950  
 Fax: +49 4193-995220

### For further information, please contact

Contact person Dataplot: +49 4193-9950  
 E-mail address info@dataplot.de

### 1.4 Emergency telephone number

Giftinformationszentrum Mainz, Germany  
 Tel: +49 6131 19240

## Section 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008

Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)

### 2.2 Label elements



Signal Word  
Danger

### Hazard Statements

H318 - Causes serious eye damage  
 H332 - Harmful if inhaled  
 H412 - Harmful to aquatic life with long lasting effects

EUH066 - Repeated exposure may cause skin dryness or cracking

#### 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

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

### 2.3 Other Hazards

#### Other Hazards

Harmful to aquatic life.

#### 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	30 - 60	(EUH066) Flam. Liq. 3 (H226)	No data available	1
Ethylene glycol monobutyl ether acetate	203-933-3	112-07-2	10 - 30	Acute Tox. 4 (H312) Acute Tox. 4 (H332)	No data available	1
Butyrolactone	202-509-5	96-48-0	10 - 30	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)	No data available	1

#### Note

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 (CO<sub>2</sub>). 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)

<b>Exposure Scenario</b>	No information available.
<b>Risk Management Methods (RMM)</b>	The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure limits

Component	The United Kingdom
Ethylene glycol monobutyl ether acetate 112-07-2	STEL: 50 ppm STEL: 332 mg/m <sup>3</sup> TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> Skin

Component	France
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VME: 2 ppm (indicative limit) TWA/VME: 13.3 mg/m <sup>3</sup> (indicative limit) STEL/VLCT: 30 ppm (indicative limit) STEL/VLCT: 199.8 mg/m <sup>3</sup> (indicative limit) Skin

Component	Germany
Ethyl 3-Ethoxypropionate	TWA/MAK: 100 ppm

763-69-9	TWA/MAK: 610 mg/m <sup>3</sup> Peak: 100 ppm Peak: 610 mg/m <sup>3</sup> TWA/AGW: 100 ppm TWA/AGW: 610 mg/m <sup>3</sup> Skin
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/MAK: 10 ppm TWA/MAK: 66 mg/m <sup>3</sup> Peak: 20 ppm Peak: 132 mg/m <sup>3</sup> TWA/AGW: 20 ppm TWA/AGW: 130 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Spain</b>
Ethylene glycol monobutyl ether acetate 112-07-2	STEL/VLA-EC: 50 ppm STEL/VLA-EC: 333 mg/m <sup>3</sup> TWA/VLA-ED: 20 ppm TWA/VLA-ED: 133 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Italy</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Portugal</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VLE-MP: 20 ppm
<b>Component</b>	<b>The Netherlands</b>
Ethylene glycol monobutyl ether acetate 112-07-2	STEL: 333 mg/m <sup>3</sup> TWA: 135 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Finland</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 130 mg/m <sup>3</sup> STEL: 50 ppm STEL: 330 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Denmark</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 130 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Austria</b>
Ethylene glycol monobutyl ether acetate 112-07-2	STEL/KZW: 40 ppm STEL/KZW: 270 mg/m <sup>3</sup> TWA/TMW: 20 ppm TWA/TMW: 133 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Switzerland</b>
Ethyl 3-Ethoxypropionate 763-69-9	STEL/KZW: 100 ppm STEL/KZW: 610 mg/m <sup>3</sup> TWA/MAK: 100 ppm TWA/MAK: 610 mg/m <sup>3</sup> Skin
Ethylene glycol monobutyl ether acetate 112-07-2	STEL/KZW: 20 ppm STEL/KZW: 132 mg/m <sup>3</sup> TWA/MAK: 10 ppm TWA/MAK: 66 mg/m <sup>3</sup> Skin

<b>Component</b>	<b>Poland</b>
Ethylene glycol monobutyl ether acetate 112-07-2	NDSch: 300 mg/m <sup>3</sup> TWA/ND: 100 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Norway</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 10 ppm TWA: 65 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Ireland</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup> STEL: 50 ppm STEL: 333 mg/m <sup>3</sup> Skin
<b>Component</b>	<b>Australia TWA</b>
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm TWA: 133 mg/m <sup>3</sup>
<b>Component</b>	<b>Australia STEL</b>
Ethylene glycol monobutyl ether acetate 112-07-2	STEL: 50 ppm STEL: 333 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available.  
**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.

#### Skin Protection

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

#### 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.

#### 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

<b>Physical State</b>	Liquid	<b>Appearance</b>	Colored
<b>Odor</b>	No information available	<b>Odor Threshold</b>	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting point/freezing point		No data available	
Boiling point/Boiling Range	> 149 °C / 300 °F		
Flash Point	64 °C / 147 °F	Setaflash closed cup	
Evaporation rate		No data available	

<b>Flammability Limit in Air</b>		
Upper flammability limit		No data available
Lower flammability limit		No data available
<b>Vapor Pressure</b>		No data available
<b>Vapor Density</b>		No data available
<b>Specific Gravity</b>	0.97	
<b>Water Solubility</b>		No data available
<b>Solubility in other solvents</b>		No data available
<b>Partition coefficient: n-octanol/water</b>		No data available
<b>Autoignition Temperature</b>		No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		No data available
<b>Explosive Properties</b>	No data available	
<b>Oxidizing Properties</b>	No data available	

**9.2 Other information**

**Softening Point** 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 (CO<sub>2</sub>). Carbon monoxide.

## Section 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects****Acute Toxicity**

<b>Inhalation</b>	There is no data for this product.
<b>Eye Contact</b>	There is no data for this product.
<b>Skin Contact</b>	There is no data for this product.
<b>Ingestion</b>	There is no data for this product.

**Unknown Acute Toxicity** 60 % of the mixture consists of ingredient(s) of unknown toxicity.

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

<b>ATEmix (oral)</b>	2,267.00 mg/kg
<b>ATEmix (dermal)</b>	2,368.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	2.40 mg/L
<b>ATEmix (inhalation-vapor)</b>	18.00 mg/L

**Unknown Acute Toxicity**

60 % of the mixture consists of ingredient(s) of unknown toxicity.

0.01 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

60 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
 60 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).  
 60 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).  
 60 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component	Oral LD50
Ethyl 3-Ethoxypropionate 763-69-9	3200 mg/kg ( Rat )
Ethylene glycol monobutyl ether acetate 112-07-2	1600 mg/kg ( Rat )
Butyrolactone 96-48-0	1540 mg/kg ( Rat )

Component	LD50 Dermal
Ethyl 3-Ethoxypropionate 763-69-9	10 mL/kg ( Rabbit )
Ethylene glycol monobutyl ether acetate 112-07-2	1480 mg/kg ( Rabbit )

Component	Inhalation LC50
Butyrolactone 96-48-0	>2.68 mg/L ( Rat ) 4 h

<b>Skin corrosion/irritation</b>	There is no data for this product.
<b>Eye damage/irritation</b>	There is no data for this product.
<b>Sensitisation</b>	There is no data for this product.
<b>Mutagenic Effects</b>	There is no data for this product.
<b>Carcinogenic effects</b>	There is no data for this product.
<b>Reproductive Effects</b>	There is no data for this product.
<b>STOT - single exposure</b>	There is no data for this product.
<b>STOT - repeated exposure</b>	There is no data for this product.
<b>Aspiration hazard</b>	There is no data for this product.

## Section 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Harmful to aquatic life Harmful to aquatic life with long lasting effects

#### Unknown Aquatic Toxicity

0.01 % 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	72h EC50 Desmodesmus subspicatus: 360 mg/L 96h EC50 Desmodesmus subspicatus: 79 mg/L

Component	Fish
Ethyl 3-Ethoxypropionate 763-69-9	96h LC50 Pimephales promelas: 62 mg/L [static]
Butyrolactone 96-48-0	96h LC50 Leuciscus idus: 220 - 460 mg/L [static]

Component	Crustacea
Ethyl 3-Ethoxypropionate 763-69-9	48h EC50 Daphnia magna: 970 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 mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**12.6 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

**ADR**

14.2 **Proper Shipping Name** Not Regulated  
Printing Ink Related Material

**ICAO / IATA / IMDG / IMO**

14.2 **Proper Shipping Name** Not Regulated  
Printing Ink Related Material

## 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)

**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**

H312 - Harmful in contact with skin

H332 - Harmful if inhaled

H226 - Flammable liquid and vapor

H302 - Harmful if swallowed

H318 - Causes serious eye damage

H336 - May cause drowsiness or dizziness

EUH066 - Repeated exposure may cause skin dryness or cracking

**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-21-2016

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

**Disclaimer**

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**End of Safety Data Sheet**