

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product name	<b>Smart-Jet® 80411</b>
Synonym(s)	Not available.
Registration number REACH	Not applicable (mixture)

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

Recommended use	Ink for inkjet printing
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**1.3. Details of the supplier of the safety data sheet**

Company identification	<b>MSSC, LLC.</b> 926 McDonough Lake Road, Collinsville, IL 62234, USA Tel: 618-343-1006 Website: www.msscllc.com
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**1.4. Emergency telephone number**

Phone number:	618-343-1006
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**Section 2: Hazard(s) identification****2.1. Classification of the substance or mixture****Product definition : Mixture****Classification according to Regulation (EC) No 1272/2008 [CLP]:**

Physical hazards	Flammable liquids. Category 2, H225
Health hazards	Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

**2.2. Label elements****Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

## Pictograms



GHS02      GHS05      GHS07

Signal word	Danger
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Hazard statements	H225- Highly flammable liquid and vapor. H318- Causes serious eye damage H336-May cause drowsiness or dizziness.
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## Precautionary statements

Prevention	P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting/equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. H261- Avoid breathing dust/fume/gas/mist/vapors/spray.
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	H271-Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P361+P353: IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P317: Get emergency medical help. P370+P378- In case of fire: for small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam to extinguish. For large fires, use water spray, fog, or alcohol-resistant foam to extinguish. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water
Storage	P403 + P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up.
Disposal	P501- Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3. Other hazards

PBT Substances	None
vPvB Substances:	None
Other hazards	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 59(1) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## Section 3: Composition/information on ingredients

3.1. Substance No

### 3.2. Mixtures

Hazardous Components (Chemical Name)/ REACH Registration No.	CAS Number	Concentration (%)	EC No./ EC index No	Classification
Ethanol	64-17-5	< 70	200-578-6 603-002-00-5	Flam. Liq. 2, H225 Eye Irrit. 2, H319
n-propanol	71-23-8	≤ 10	200-746-9 603-003-00-0	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336
n-butanol	71-36-3	≤ 5	200-751-6 603-004-00-6	Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336, H335 Concentration limits: >= 20 %: STOT SE 3, H335; >= 20 %: STOT SE3, H336;
γ-butyrolactone	96-48-0	≤ 5	202-509-5	Acute Tox. 4, H302 Eye Dam. 1, H318 STOT SE 3, H336
Diacetone alcohol	123-42-2	<4	204-626-7 603-016-00-1	Eye Irrit. 2 H319 Specific concentration limits: Eye Irrit. 2 (H319) : C>=10%

Solvent Blue 70	12237-24-0	≤6	602-674-7	Aquatic Chronic 3: H412
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#### Section 4: First-aid measures

##### 4.1. Description of first aid measures

###### In case of:

Inhalation	Move person to fresh air immediately. If symptoms persist, get immediate medical attention.
Skin contact	In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash clothing separately before reuse. Get medical attention, if needed.
Eye contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
Ingestion	Rinse mouth out with water. If the material is swallowed, get immediate medical attention or advice - Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

##### 4.2. Most important symptoms/ effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

##### 4.3. Indication of any immediate medical attention and special treatment needed

No special treatment needed, treat symptomatically.

#### Section 5. Fire-fighting measures

##### 5.1. Extinguishing media

**Suitable extinguishing media** sand, carbon dioxide (CO<sub>2</sub>) or dry chemical.

**Unsuitable extinguishing media** Not available.

##### 5.2. Special hazards arising from the substance or mixture

In case of fire, smoke and other combustion products may be formed, the inhalation of such combustion products can have serious adverse effects on health.

##### 5.3. Advice for firefighters

Wear suitable protective suit and self-contained breathing apparatus.

#### Section 6: Accidental release measures

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

For non-emergency personnel

- (a) the wearing of suitable protective equipment (including personal protective equipment referred to under section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing;
- (b) removal of ignition sources, provision of sufficient ventilation, control of dust; and
- (c) emergency procedures such as the need to evacuate the danger area or to consult an expert.

For personal protection see section 8.

##### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

##### 6.3. Methods and materials for containment and cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to sealable containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

##### 6.4. Reference to other sections

For further and detailed information see section 8 and 13.

#### Section 7. Handling and storage

##### 7.1 Precautions for safe handling

##### Advice on protection against fire and explosion

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Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

**Hygiene measures**

Change contaminated clothing. Wash hands after working with substance. For further precautions information see section 2.2.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

**7.3 Specific end uses**

No specific uses are stipulated.

**Section 8. Exposure controls/personal protection**

**8.1 Control parameters National limit values**

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Source
GB	n-propanol	71-23-8		WEL	200	500	250	625	EH40/2005
GB	Diacetone alcohol	123-42-2		WEL	50	241	75	362	EH40/2005
IE	N-Butanol	71-36-3		OELV	20				S.I. No. 619

**Notation**

**STEL** Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

**TWA** Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

**i** Inhalable fraction

**r** Respirable fraction

**Relevant DNELs/DMELs/PNECs and other threshold levels**

- human health values

	End point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
1-propanol	DNEL	1.723 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
	DNEL	268 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
	DNEL	1.723 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
	DNEL	136 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Diacetone alcohol	DNEL	32,6 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
	DNEL	240 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	
	DNEL	467 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Ethanol	DNEL	1.900 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute- systemic effects
	DNEL	343 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
	DNEL	950 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
N-Butanol	DNEL	310 mg/kg	human, inhalatory	worker (industry)	chronic - local effects

γ-Butyrolactone	DNEL	19 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
	DNEL	130 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
<ul style="list-style-type: none"> <li>environmental values</li> </ul>					
	End point	Threshold level	Environmental compartment		
Ethanol	PNEC	0,79 mg/cm <sup>3</sup>	marine water		
	PNEC	2,75 mg/cm <sup>3</sup>	air		
	PNEC	3,6 mg/cm <sup>3</sup>	freshwater sediment		
	PNEC	580 mg/cm <sup>3</sup>	sewage treatment plant (STP)		
	PNEC	0,63 mg/cm <sup>3</sup>	soil		
	PNEC	0,96 mg/cm <sup>3</sup>	freshwater		
N-Butanol	PNEC	0,0082 mg/l	marine water		
	PNEC	0,178 mg/kg	freshwater sediment		
	PNEC	2.476 mg/l	sewage treatment plant (STP)		
	PNEC	0,015 mg/kg	soil		
	PNEC	0,082 mg/l	freshwater		
	PNEC	2,25 mg/l	Water		
1-propanol	PNEC	10 mg/L	freshwater		
	PNEC	1mg/L	marine water		
	PNEC	96 mg/L	sewage treatment plant (STP)		
	PNEC	22.8 mg/kg	freshwater sediment		
	PNEC	2.28 mg/kg	marine sediment		
	PNEC	2.2 mg/kg	soil		
Diacetone alcohol	PNEC	2 mg/L	freshwater		
	PNEC	0.2mg/L	marine water		
	PNEC	10 mg/L	sewage treatment plant (STP)		
	PNEC	7.4 mg/kg	freshwater sediment		
	PNEC	0.74 mg/kg	marine sediment		
	PNEC	0.31mg/kg	soil		
γ-Butyrolactone	PNEC	0,02 mg/l	marine sediment		
	PNEC	0,0056 mg/l	marine water		
	PNEC	0,56 mg/l	air		
	PNEC	0,24 mg/l	freshwater sediment		
	PNEC	0,056 mg/l	freshwater		
	PNEC	452 mg/l	sewage treatment plant (STP)		

## 8.2 Exposure controls

### Individual protection measures, such as personal protective equipment

**Eye/face protection**

Wear safety glasses; chemical goggles (if splashing is possible).  
Eye wash fountain and emergency showers are recommended.

**Skin and body protection**

Protective suit, Safety shoes.

**Hand protection**

Wear appropriate chemical resistant gloves.

**Respiratory protection**

Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

**Thermal hazards**

Not available.

**General hygiene considerations**

Do not get this material in contact with skin. Avoid contact with skin, eyes and clothing.

When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.  
Launder contaminated clothing before reuse.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Color</b>	Blue
<b>Odor</b>	Characteristic
<b>Melting point/freezing point;</b>	Not available.
<b>Boiling point or initial boiling point and boiling range</b>	>70°C at 1,013 hPa - lit.
<b>Flammability (solid, gas)</b>	Not available.
<b>Lower and upper explosion limit</b>	Not available.
<b>Flash point</b>	20°C (closed-cup)
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>pH</b>	Not available.
<b>Viscosity (cPs)</b>	Not available.
<b>Solubility(ies)</b>	Soluble in ethanol.
<b>Partition coefficient n-octanol/water (log value)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Density and/or relative density</b>	Not available.
<b>Relative vapour density</b>	Not available.
<b>Particle characteristics</b>	Not available.
<b>9.2 Other information</b>	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	Not available.
<b>10.2 Chemical stability</b>	Stable at normal conditions.
<b>10.3 Possibility of hazardous reactions</b>	None known.
<b>10.4 Conditions to avoid</b>	Heat, flames and sparks.
<b>10.5 Incompatible materials</b>	Not available.
<b>10.6 Hazardous decomposition products</b>	Hazardous combustion products: see section 5

## Section 11. Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity value

Components	Species	Test results
<b>Ethanol (CAS 64-17-5)</b>		
<b>Acute</b>		
Inhalation (LC50)	Rat	124.7 mg/l – vapor 4 h
Oral (LD50)	Rat	10,470 mg/kg
<b>N-Butanol (71-36-3)</b>		
Oral (LD50)	Rat	790 mg/kg
Dermal (LD50)	Rabbit	3.430 mg/kg
<b>1-Propanol (71-23-8)</b>		
Inhalation (LC50)	Rat - male and female	4 h - > 33,8 mg/l
Dermal (LD50)	Rabbit - male	4.032 mg/kg
<b><math>\gamma</math>-butyrolactone (CAS 96-48-0)</b>		
Oral (LD50)	Rat	1.582 mg/kg
Inhalation (LC50)	Rat - male and female	4 h - > 5,1 mg/l
Dermal (LD50)	Guinea pig	-5.000 mg/kg
<b>Diacetone Alcohol (CAS 123-42-2)</b>		
<b>Acute</b>		
Oral (LD50)	Rat	3.002 mg/kg
Dermal (LD50)	Rabbit	13.630 mg/kg
<b>Skin corrosion/irritation</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage	
<b>Respiratory or skin sensitisation</b>	Not available.	
<b>Germ cell mutagenicity</b>	Not available.	
<b>Carcinogenicity</b>	Not available.	
<b>Reproductive toxicity</b>	Not available.	
<b>STOT-single exposure;</b>	May cause drowsiness or dizziness.	
<b>STOT-repeated exposure;</b>	Not available.	
<b>Aspiration hazard</b>	Not available.	

### 11.2 Information on other hazards

Product name: Smart-Jet® 80411  
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### 11.2.1 Endocrine disrupting properties

Not available.

### 11.2.2 Other information

Not available.

## Section 12. Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

##### Components

##### Species

##### Test Results

#### Ethanol (CAS 64-17-5)

##### Aquatic

Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	> 100 mg/l, 96 hours

#### N-Butanol (CAS 71-36-3)

Fish	LC50	<i>Pimephales promelas</i> (fathead minnow)	1.376 mg/l; 96 h
Daphnia and other aquatic invertebrates	EC50 NOEC	Daphnia and other aquatic invertebrates	1.328 mg/l; 48 h 4.1 mg/l – 21d

#### $\gamma$ -butyrolactone (CAS 96-48-0)

Fish	static test LC50	<i>Lepomis macrochirus</i> (Bluegill sunfish)	56 mg/l - 96 h
Daphnia and other aquatic invertebrates	static test EC50	<i>Daphnia magna</i> (Water flea)	>500 mg/l - 48 h
Algae	IC50	<i>Desmodesmus subspicatus</i> (green algae)	1.000 mg/l - 72 h
Bacteria	EC20	activated sludge	4.518 mg/l – 40 hours

#### Diacetone Alcohol (CAS 123-42-2)

Fish	LC50	<i>Oryzias latipes</i> (Orange-red killifish)	> 100 mg/l - 96 h
Daphnia and other aquatic invertebrates	EC50	<i>Daphnia magna</i> (Water flea)	> 1.000 mg/l - 48 h
Algae	IC50	<i>Pseudokirchneriella subcapitata</i> (green algae)	1.000 mg/l - 72 h
Bacteria	EC50	activated sludge	> 1.000 mg/l - 3 h

#### 1-Propanol (CAS 71-23-8)

Fish	LC50	<i>Pimephales promelas</i> (fathead minnow)	4.555 mg/l - 96 h
Daphnia and other aquatic invertebrates	EC50	<i>Daphnia magna</i> (Water flea)	3.644 mg/l - 48 h
Algae	ErC50	<i>Pseudokirchneriella subcapitata</i>	9.170 mg/l - 48 h
Bacteria	IC20	activated sludge	> 1.000 mg/l - 3 h

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

**12.7 Other adverse effects** Data are not available.

### Section 13. Disposal considerations

#### 13.1 Waste treatment methods

**Product** Dispose of waste material in accordance with local, state and federal pollution regulations.

**Contaminated packaging** When disposing of an empty container, dispose after removing contents materials completely. Only store in correctly labelled containers.

### Section 14. Transport information

#### 14.1 UN number

**ADR/RID:** UN1210                      **AND:** UN1210                      **IMDG:** UN1210                      **IATA:** UN1210

#### 14.2 UN proper shipping name

**ADR/RID:** Printing Ink                      **AND:** Printing Ink                      **IMDG:** Printing Ink                      **IATA:** Printing Ink

#### 14.3 Transport hazard class(es)

**ADR/RID:** Class 3                      **AND:** Class 3                      **IMDG:** Class 3                      **IATA:** Class 3

#### 14.4 Packing group

**ADR/RID:** II                      **AND:** II                      **IMDG:** II                      **IATA:** II

#### 14.5 Environmental hazards

**ADR/RID:** None                      **AND:** None                      **IMDG:** None                      **IATA:** None

#### 14.6 Special precautions for user

Not applicable

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable

### Section 15 - Regulatory Information

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

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

**Guidance** Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

**15.2. Chemical safety assessment** No chemical safety assessment has been carried out.

### Section 16 - Other Information

**Issue date** 16-March-2022

**Revision date** 15-January -2024

**Version #** 2.0

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