

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

Product name **Smart-Jet® 85803**

Synonym(s) **Black ink**

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

**1.3. Details of the supplier of the safety data sheet**

Company identification **MSSC, LLC.**  
926 McDonough Lake Road, Collinsville, IL 62234, USA  
Tel: 618-343-1006  
Website: www.msscllc.com

**1.4. Emergency telephone number**

Phone number: 618-343-1006

**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; Narcotic effects (Category 3), H336

**2.2. Label elements**

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

Pictograms



Signal word

**Danger**

Hazard statements

H225 - Highly flammable liquid and vapor.  
H318 - Causes serious eye damage  
H336 - May cause drowsiness or dizziness

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.  
P264+P265-Wash hands [and ...] thoroughly after handling. Do not touch eyes.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

303+P361+P353: IF ON SKIN (or hair): Take off Immediately all contaminated clothing.

Rinse SKIN with water [or shower].

P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes.

Remove contact lenses if present and easy to do. Continue rinsing.

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 | EC Number | Concentration (%) | Classification  |
|--|------------|-----------|-------------------|---|
| 2-Butanone   | 78-93-3    | 201-159-0 | ≤ 40              | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3: H336   |
| 1-methoxy-2-propanol   | 107-98-2   | 203-539-1 | ≤ 20              | Flam. Liq. 3: H226<br>STOT SE 3: H336   |
| Ethanol  | 64-17-5    | 200-578-6 | <10               | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319  |
| Cyclohexanone  | 108-94-1   | 203-631-1 | <10               | Flam. Liq. 3:H226<br>Acute Tox.(I) 4: H332<br>Acute Tox.(O) 4: H302<br>Acute Tox.(D) 4: H312<br>Skin Irrit. 2: H315<br>Eye Dam. 1: H318 |
| 1,3-dioxolane  | 646-06-0   | 211-463-5 | <10               | Flam. Liq. 2, H225  |
| heptan-2-one   | 110-43-0   | 203-767-1 | <5                | Flam. Liq. 3:H226<br>Acute Tox.(O) 4: H302<br>Acute Tox.(I) 4: H332   |

## 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<br>- 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

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 | TWA | STEL | STEL | Source |
|---------|---------------|--------|----------|------------|-----|-----|------|------|--------|
|---------|---------------|--------|----------|------------|-----|-----|------|------|--------|

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|    |                      |          |  |       | [ppm] | [mg/m <sup>3</sup> ] | [ppm] | [mg/m <sup>3</sup> ] |            |
|----|----------------------|----------|--|-------|-------|----------------------|-------|----------------------|------------|
| IE | 2-Butanone           | 78-93-3  |  | OELV  | 200   | 600                  | 300   | 900                  | 2000/39/EC |
| GB | 2-Butanone           | 78-93-3  |  | WEL   | 200   | 600                  | 300   | 899                  | EH40/2005  |
| EU | 1-methoxy-2-propanol | 107-98-2 |  | IOELV | 100   | 375                  | 150   | 568                  | 2000/39/EC |
| MT | 1-methoxy-2-propanol | 107-98-2 |  | OELV  | 100   | 375                  | 150   | 568                  | CAP. 424   |
| EU | Cyclohexanone        | 108-94-1 |  | IOELV | 10    | 40.8                 | 20    | 81.6                 | 2000/39/EC |
| MT | Cyclohexanone        | 108-94-1 |  | OELV  | 10    | 40.8                 | 20    | 81.6                 | L.N. 227   |
| EU | heptan-2-one         | 110-43-0 |  | IOELV | 238   | 50                   | 100   | 475                  | 2000/39/EC |

#### 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              |
| 2-Butanone             | DNEL      | 600 mg/m <sup>3</sup>   | human, inhalatory                  | worker (industry)         | acute- systemic effects    |
|                        | DNEL      | 1161 mg/kg              | human, dermal                      | worker (industry)         | chronic - systemic effects |
| 1-methoxy-2-propanol   | DNEL      | 553.5 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry)         | acute- systemic effects    |
|                        | DNEL      | 369 mg/m <sup>3</sup>   | human, inhalatory                  | worker (industry)         | chronic - systemic effects |
|                        | DNEL      | 183 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 |
| Cyclohexanone          | DNEL      | 20 mg/kg                | human, dermal                      | worker (industry)         | chronic - systemic effects |
|                        | DNEL      | 20 mg/m <sup>3</sup>    | human, inhalatory                  | worker (industry)         | chronic – local effects    |
|                        | DNEL      | 20 mg/m <sup>3</sup>    | human, inhalatory                  | worker (industry)         | chronic - systemic effects |
| heptan-2-one           | DNEL      | 54,27 mg/kg             | human, dermal                      | worker (industry)         | chronic - systemic effects |
|                        | DNEL      | 1516 mg/m <sup>3</sup>  | human, inhalatory                  | worker (industry)         | chronic - systemic effects |
| • environmental values |           |                         |                                    |                           |                            |
|                        | End point | Threshold level         |                                    | Environmental compartment |                            |
| 2-Butanone             | PNEC      | 55,8 mg/cm <sup>3</sup> |                                    | marine water              |                            |

|                      |      |                           |                              |
|----------------------|------|---------------------------|------------------------------|
|                      | PNEC | 284,7 mg/cm <sup>3</sup>  | freshwater sediment          |
|                      | PNEC | 709 mg/cm <sup>3</sup>    | sewage treatment plant (STP) |
|                      | PNEC | 22.5 mg/cm <sup>3</sup>   | soil                         |
|                      | PNEC | 55,8 mg/cm <sup>3</sup>   | freshwater                   |
| 1-methoxy-2-propanol | PNEC | 10 mg/L                   | freshwater                   |
|                      | PNEC | 1 mg/L                    | marine water                 |
|                      | PNEC | 100 mg/L                  | sewage treatment plant (STP) |
|                      | PNEC | 5.2 mg/kg                 | freshwater sediment          |
|                      | PNEC | 4.59 mg/kg                | soil                         |
| 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                   |
| Cyclohexanone        | PNEC | 0,0329 mg/cm <sup>3</sup> | marine water                 |
|                      | PNEC | 0,0951 mg/cm <sup>3</sup> | freshwater sediment          |
|                      | PNEC | 0,0329 mg/cm <sup>3</sup> | freshwater                   |
|                      | PNEC | 0,0143 mg/cm <sup>3</sup> | soil                         |
| heptan-2-one         | PNEC | 0,0982 mg/l               | freshwater                   |
|                      | PNEC | 0,00982 mg/l              | marine water                 |
|                      | PNEC | 12,5 mg/l                 | sewage treatment plant (STP) |
|                      | PNEC | 3,29 mg/kg                | freshwater sediment          |
|                      | PNEC | 0,329 mg/kg               | marine sediment              |
|                      | PNEC | 0,29 mg/kg                | soil                         |

## 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

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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

|  |                           |
|--|---------------------------|
| Physical state   | Liquid                    |
| Color  | Black                     |
| Odor   | Characteristic            |
| Melting point/freezing point;                            | Not available.            |
| Boiling point or initial boiling point and boiling range | >70°C at 1,013 hPa - lit. |
| Flammability (solid, gas)                                | Not available.            |
| Lower and upper explosion limit                          | Not available.            |
| Flash point  | 12°C (closed-cup)         |
| Auto-ignition temperature                                | Not available.            |
| Decomposition temperature                                | Not available.            |
| pH   | Not available.            |
| Viscosity (cPs)  | Not available.            |
| Solubility(ies)  | Soluble in ketone.        |
| Partition coefficient n-octanol/water (log value)        | Not available.            |
| Vapor pressure   | Not available.            |
| Density and/or relative density                          | Not available.            |
| Relative vapour density                                  | Not available.            |
| Particle characteristics                                 | Not available.            |
| 9.2 Other information                                    | Not available.            |

## Section 10. Stability and reactivity

|   |  |
|---|--|
| 10.1 Reactivity                         | Not available.                               |
| 10.2 Chemical stability                 | Stable at normal conditions.                 |
| 10.3 Possibility of hazardous reactions | None known.                                  |
| 10.4 Conditions to avoid                | Heat, flames and sparks.                     |
| 10.5 Incompatible materials             | Not available.                               |
| 10.6 Hazardous decomposition products   | 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 |
|------------|---------|--------------|
|------------|---------|--------------|

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## 2-Butanone (CAS 78-93-3)

### Acute

|                   |                 |  |
|-------------------|-----------------|--|
| Inhalation (LC50) | Mouse<br>Mammal | 4 h - 32.000 mg/m <sup>3</sup><br>38.000 mg/m <sup>3</sup> |
| Oral (LD50)       | Rat             | 2.737 mg/kg  |
| Dermal (LD50)     | Rabbit          | 6.480 mg/kg  |

## 1-methoxy-2-propanol (CAS 107-98-2)

### Acute

|                   |        |                     |
|-------------------|--------|---------------------|
| Inhalation (LC50) | Rat    | 10,000 mg/l, 5 Hour |
| Oral (LD50)       | Mouse  | 11,700mg/kg         |
| Dermal (LD50)     | Rabbit | 13,000mg/kg         |

## Ethanol (CAS 64-17-5)

### Acute

|                   |     |                        |
|-------------------|-----|------------------------|
| Inhalation (LC50) | Rat | 124.7 mg/l – vapor 4 h |
| Oral (LD50)       | Rat | 10,470 mg/kg           |

## Cyclohexanone (CAS 108-94-1)

### Acute

|                   |        |                     |
|-------------------|--------|---------------------|
| Inhalation (LC50) | Rat    | > 6.2 mg/l, 4 Hours |
| Dermal (LD50)     | rabbit | 3,160 mg/kg         |
| Oral (LD50)       | Rat    | 1,534 mg/kg         |

## 1,3-Dioxolane (CAS 646-06-0)

### Acute

|                   |     |                     |
|-------------------|-----|---------------------|
| Inhalation (LC50) | Rat | 20650 mg/l, 4 hours |
| Oral (LD50)       | Rat | 3000mg/kg           |

## heptan-2-one (110-43-0)

|                   |        |               |
|-------------------|--------|---------------|
| Oral (LD50)       | Rat    | 1600 mg/kg    |
| Dermal (LD50)     | Rabbit | > 5,000 mg/kg |
| Inhalation (LC50) | Rat    | > 16.7 mg/l   |

**Skin corrosion/irritation** Not available.

**Serious eye damage/eye irritation** Causes serious eye damage

**Respiratory or skin sensitisation** Not available.

**Germ cell mutagenicity** Not available.

**Carcinogenicity** Not available.

**Reproductive toxicity** Not available.

**STOT-single exposure;** May cause drowsiness or dizziness

**STOT-repeated exposure;** Not available.

**Aspiration hazard** Not available.

## 11.2 Information on other hazards

### 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              |
|--|--|--|---------------------------|
| <b>2-Butanone (CAS 78-93-3)</b>                |  |  |                           |
| <b>Aquatic</b>                                 |  |  |                           |
| Daphnia and other aquatic invertebrates        | LC50   | Water flea ( <i>Daphnia magna</i> )              | 520 mg/l - 48 h           |
| Fish   | NOEC   | <i>Cyprinodon variegatus</i> (sheepshead minnow) | 400 mg/l - 96 h           |
|  | LC50   | <i>Pimephales promelas</i> (fathead minnow)      | 3.130 - 3.320 mg/l - 96 h |
| <b>1-methoxy-2-propanol (CAS 107-98-2)</b>     |  |  |                           |
| Fish   | LC50   | <i>Oncorhynchus mykiss</i> (rainbow trout)       | >1000 mg/l - 96 h         |
| <b>Ethanol (CAS 64-17-5)</b>                   |  |  |                           |
| <b>Aquatic</b>                                 |  |  |                           |
| 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      |
| <b>Cyclohexanone (CAS 108-94-1)</b>            |  |  |                           |
| Daphnia and other aquatic invertebrates        | LC50   | <i>Daphnia magna</i> (Water flea)                | 820 mg/l - 24 h           |
| <b>1,3-Dioxolane(CAS 646-06-0)</b>             |  |  |                           |
| Crustacea                                      | LC50   | Water flea ( <i>Daphnia magna</i> )              | 6.0-7.8 mg/l - 48 h       |
| <b>heptan-2-one (110-43-0)</b>                 |  |  |                           |
| Daphnia and other aquatic invertebrates        | EC50   | <i>Pseudokirchneriella subcapitata</i>           | > 90.1 mg/l -48 h         |
| Fish   | LC50   | <i>Pimephales promelas</i> (fathead minnow)      | 126 - 137 mg/l -96 h      |
| Algae  | EC50   | <i>Pseudokirchneriella subcapitata</i> (algae)   | 98.2 mg/l- 72 h           |
| <b>12.2 Persistence and degradability</b>      | Data are not available.  |  |                           |
| <b>12.3 Bioaccumulative potential</b>          | Does not significantly accumulate in organisms.                                    |  |                           |
| <b>12.4 Mobility in soil</b>                   | Data are not available.  |  |                           |
| <b>12.5 Results of PBT and vPvB assessment</b> | According to the results of its assessment, this substance is not a PBT or a vPvB  |  |                           |
| <b>12.6 Endocrine disrupting properties</b>    | Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ . |  |                           |
| <b>12.7 Other adverse effects</b>              | Data are not available.  |  |                           |

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

|                               |  |
|-------------------------------|--|
| <b>Product</b>                | Dispose of waste material in accordance with local, state and federal pollution regulations.   |
| <b>Contaminated packaging</b> | 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

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**Revision date**                      19-August-2024

**Version #**                      1.1

#### Disclaimer

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