

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

Product name **Smart-Jet® 81860**  
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](http://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 Eye irritation (Category 2), H319  
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 GHS07

Signal word

**Danger**

Hazard statements

H225- Highly flammable liquid and vapor.  
H319- Causes serious eye irritation.  
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.  
P261- Avoid breathing dust/fume/gas/mist/vapors/spray.  
P271- Use only outdoors or in a well-ventilated area.

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

Response	<p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P317: If eye irritation persists: Get medical help. 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. P319 Get medical help if you feel unwell. 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</p>
Storage	<p>P403 + P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up.</p>
Disposal	<p>P501- Dispose of contents/container in accordance with local/regional/national/international regulations.</p>

### 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 57(f) 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
Ethanol	64-17-5	200-578-6	<40	Flam. Liq. 2, H225 Eye Irrit. 2, H319
1-methoxy-2-propanol	107-98-2	203-539-1	<27	Flam. Liq. 3: H226 STOT SE 3: H336
2-Butanone	78-93-3	201-159-0	≤20	Flam. Liq. 2: H225 Eye Irrit. 2: H319 STOT SE 3: H336 Concentration limits: 20 %: STOT SE 3, H336;
Dipropylene glycol methyl ether acetate	88917-22-0	618-219-0	<10	Skin Irrit. 2: H315 Eye Irrit. 2:H319 STOT SE 3:H335

## 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

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
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

**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
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
2-Butanone	DNEL	600 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute- 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

- environmental values

	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
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

## 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>	Black
<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>	22°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>2-Butanone (CAS 78-93-3)</b>		
<b>Acute</b>		
Inhalation (LC50)	Mouse Mammal	4 h - 32.000 mg/m <sup>3</sup> 38.000 mg/m <sup>3</sup>
Oral (LD50)	Rat	2.737 mg/kg
Dermal (LD50)	Rabbit	6.480 mg/kg
<b>1-methoxy-2-propanol (CAS 107-98-2)</b>		
<b>Acute</b>		
Inhalation (LC50)	Rat	10,000 mg/l, 5 Hour
Oral (LD50)	Mouse	11,700mg/kg
Dermal (LD50)	Rabbit	13,000mg/kg
<b>Dipropylene glycol methyl ether acetate (88917-22-0)</b>		
Oral (LD50)	Rat	> 5000 mg/kg
Dermal (LD50)	rabbit	>5000 mg/kg
<b>Skin corrosion/irritation</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	May cause eye irritation.	
<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

### 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>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>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

**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

