

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

Product name **Smart-Jet® 81830**

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

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.mssclic.com

1.4. Emergency telephone number

Phone number: 618-343-1006

Section 2: Hazard(s) identification**2.1. Classification of the substance or 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

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

Pictograms



GHS02 GHS05

Signal word Danger

Hazard statements H225- Highly flammable liquid and vapor.
H318- Causes serious eye damage

Precautionary statements

Prevention P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
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.

P264 - Wash thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
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.
P310: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353- IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
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 No other hazards

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 | >81 | 200-578-6 603-002-00-5 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 |
| n-butanol | 71-36-3 | ≤5 | 200-751-6 603-004-00-6 | Flam. Liq. 3: H226 Acute Tox. 4: H302 STOT SE 3: H335 STOT SE 3: H336 Skin Irrit. 2: H315 Eye Dam. 1: H318 |
| Acetone | 67-64-1 | <4 | 200-662-2 606-001-00-8 | Flam. Liq. 1: H225 Eye Irrit. 2: H319 STOT SE 3: H336 |
| White pigment | Proprietary | <10 | NA | Not classified |

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

See 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 (CO₂) 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

Wear appropriate personal protective equipment as specified in 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 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 ³] | STEL [ppm] | STEL [mg/m ³] | Source | |
|---------|---------------|---------|------------------------|------------|-----------|--------------------------|------------|---------------------------|--------------|--|
| IE | N-Butanol | 71-36-3 | | OELV | 20 | | | | S.I. No. 619 | |
| EU | Acetone | 67-64-1 | | | 500 | 1210 | | | 2000/39/EC | |
| | Ethanol | 64-17-5 | Data are not available | | | | | | | |

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 ³ | human, inhalatory | worker (industry) | acute- systemic effects |
| | DNEL | 343 mg/kg | human, dermal | worker (industry) | chronic - systemic effects |
| | DNEL | 950 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| N-Butanol | DNEL | 310 mg/kg | human, inhalatory | worker (industry) | chronic - local effects |
| Acetone | DNEL | 2.400 mg/m ³ | human, inhalatory | worker (industry) | acute- systemic effects |
| | DNEL | 1 210 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| | DNEL | 186 mg/kg | human, dermal | worker (industry) | chronic - systemic effects |
| <ul style="list-style-type: none"> environmental values | | | | | |
| | End point | Threshold level | Environmental compartment | | |
| Ethanol | PNEC | 0,79 mg/cm ³ | marine water | | |
| | PNEC | 2,75 mg/cm ³ | air | | |
| | PNEC | 3,6 mg/cm ³ | freshwater sediment | | |
| | PNEC | 580 mg/cm ³ | sewage treatment plant (STP) | | |
| | PNEC | 0,63 mg/cm ³ | soil | | |
| | PNEC | 0,96 mg/cm ³ | 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 | | |
| Acetone | PNEC | 10.6 mg/L | freshwater | | |
| | PNEC | 1.06 mg/L | marine water | | |
| | PNEC | 100 mg/L | sewage treatment plant (STP) | | |
| | PNEC | 30.4 mg/kg | freshwater sediment | | |
| | PNEC | 29.5 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

| | |
|---|---------------------|
| Appearance | White liquid |
| Odor | Characteristic |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point; | Not available. |
| Initial boiling point and boiling range | >70°C |
| Flash point | 13°C (closed-cup) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit – lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit – lower (%) | Not available. |
| Explosive limit – upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | Soluble in ethanol. |
| Partition coefficient: n-octanol/water | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity (cPs) | 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 toxicological effects

Acute toxicity value

| Components | Species | Test results |
|---|-----------------------------------|--|
| Ethanol (CAS 64-17-5) | | |
| Acute | | |
| Inhalation (LC50) | Mouse Rat | 39 mg/l, 4 Hours 20000 mg/l, 10 Hours |
| Oral (LD50) | Dog Guinea pig Mouse Rat | 5.5 g/kg 5.6 g/kg Mouse 3450 mg/kg Rat 7060 mg/kg 6.2 g/kg |
| N-Butanol (71-36-3) | | |
| Oral (LD50) | Rat | 790 mg/kg |
| Dermal (LD50) | Rabbit | 3.430 mg/kg |
| Acetone (CAS 67-64-1) | | |
| Acute | | |
| Inhalation (LC50) | Rat | 50.100 mg/m ³ |
| Oral (LD50) | Rat | 5.800 mg/kg |
| Dermal (LD50) | Guinea pig | 7.426 mg/kg |
| Skin corrosion/irritation | Not available. | |
| Serious eye damage/eye irritation | Causes serious eye damage | |
| Respiratory sensitization | Not available. | |
| Skin sensitization | Not available. | |
| Germ cell mutagenicity | Not available. | |
| Carcinogenicity | Not available. | |
| Specific target organ toxicity - single exposure | Not available. | |
| Specific target organ toxicity - repeated exposure | Not available. | |
| Aspiration hazard | 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 (Daphnia magna) | 7.7 - 11.2 mg/l, 48 hours |

| | | | |
|--|----------------|--|------------------------------------|
| Fish | LC50 | Fathead minnow (Pimephales promelas) | > 100 mg/l, 96 hours |
| N-Butanol (CAS 71-36-3) | | | |
| Fish | LC50 | Pimephales promelas (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 |
| Acetone (CAS 67-64-1) | | | |
| Fish | LC50 | Oncorhynchus mykiss (rainbow trout) | 5.540 mg/l - 96 h |
| Daphnia and other aquatic invertebrates | LC50 | Daphnia magna (Water flea) | 8,800 mg/l - 48 h |
| 12.2 Persistence and degradability | Not available. | | |
| 12.3 Bioaccumulative potential | Not available. | | |
| 12.4 Mobility in soil | Not available. | | |
| 12.5 Results of PBT and vPvB assessment | Not available. | | |
| 12.6 Other adverse effects | 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 **IMDG:** UN1210 **ICAO-IATA/DGR:** UN1210

14.2 UN proper shipping name

ADR/RID: Printing Ink **IMDG:** Printing Ink **ICAO-IATA/DGR:** Printing Ink

14.3 Transport hazard class(es)

ADR/RID: Class 3 **IMDG:** Class 3 **ICAO-IATA/DGR:** Class 3

14.4 Packing group

ADR/RID: II **IMDG:** II **ICAO-IATA/DGR:** II

14.5 Environmental hazards None

14.6 Special precautions for user None

**14.7 Transport in bulk according to
Annex II of MARPOL and the IBC Code** 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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