

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

Product name **Smart-Jet® 80400UV**

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

Physical hazards Flammable liquids. Category 3, H226

Health hazards Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Skin sensitization (Category 1), H317
Hazardous to the aquatic environment, long-term hazard (Category 3), H412

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
H315- Causes skin irritation.
H317- May cause an allergic skin reaction.
H319- Causes serious eye irritation.
H412-Harmful to aquatic life with long lasting effects

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.
P261- Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash thoroughly after handling.
P272- Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response	P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313 IF SKIN irritation occurs: Get medical advice/attention. P337+P313 IF eye irritation persists: Get medical advice/attention. 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	>50	200-578-6 603-002-00-5	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Acetone	67-64-1	≤2	200-662-2 606-001-00-8	Flam. Liq. 2: H225 Eye Irrit. 2: H319 STOT SE 3: H336
1,6 hexandiol dicarylate	13048-33-4	≤25	235-921-9 607-109-00-8	Skin Irrit. 2: H315 Eye Irrit. 2: H319 Skin Sens. 1: H317
Pentaerythritol, ethoxylated, esters with acrylic acid	51728-26-8	≤ 6	500-111-9	Skin Irrit. 2: H315 Eye Irrit. 2: H319 Aquatic Chronic 2: H411
Phenylbis(2,4,6- trimethylbenzoyl) phosphine oxide	162881-26-7	<3	423-340-5 015-189-00-5	Skin Sens. 1A, H317 Aquatic Chronic 4, H413
Phenoxy ethyl acrylate	48145-04-6	<8	256-360-6	Skin Irrit. 2: H315 Eye Irrit. 2: H319
Pigment Black	1333-86-4	<6	215-609-9	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
EU	Acetone	67-64-1			500	1210			2000/39/EC
	Ethanol	64-17-5	Data are not available						
	1,6-Hexanediol diacrylate	13048-33-4							
	Ethylene glycol phenyl ether acrylate	48145-04-6							
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				
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				
1,6-Hexanediol diacrylate	DNEL	2.77 mg/kg	human, dermal	worker (industry)	chronic - systemic effects				
	DNEL	24.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects				
Phenylbis(2,4,6-trimethylbenzoyl) phosphine oxide	DNEL	3 mg/kg	human, dermal	worker (industry)	chronic - systemic effects				
	DNEL	21 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects				
Ethylene glycol phenyl ether acrylate	DNEL	12 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects				
	DNEL	3.5 mg/kg	human, dermal	worker (industry)	chronic - systemic effects				
• 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						
	PNEC	4.59 mg/kg	soil						
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						

1,6-Hexanediol diacrylate	PNEC	0.007 mg/L	freshwater
	PNEC	0.001 mg/L	marine water
	PNEC	2.7 mg/L	sewage treatment plant (STP)
	PNEC	0.493 mg/kg	freshwater sediment
	PNEC	0.094 mg/kg	soil
Phenylbis(2,4,6-trimethylbenzoyl) phosphine oxide	PNEC	0,001 mg/l	freshwater
	PNEC	0,001 mg/l	marine water
	PNEC	1 mg/l	sewage treatment plant (STP)
	PNEC	0,712 mg/kg	freshwater sediment
	PNEC	20 mg/kg	soil
Ethylene glycol phenyl ether acrylate	PNEC	2 µg/l	freshwater
	PNEC	0.2 µg/l	marine water
	PNEC	1.77 mg/l	sewage treatment plant (STP)
	PNEC	0.02 mg/kg	Fresh water sediment
	PNEC	0.002 mg/kg	Marine water sediment
	PNEC	0.006 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

Black 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	20°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

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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
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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

1,6-Hexanediol diacrylate (CAS 13048-33-4)

Inhalation (LC50)	Rat-Male and female	0,41 mg/l, 7 Hours
Oral (LD50)	Rat	5000 mg/kg
Dermal (LD50)	Rabbit	3650 mg/kg

Phenylbis(2,4,6-trimethylbenzoyl) phosphine oxide (CAS 162881-26-7)

Oral (LD50)	Rat	> 2.000 mg/kg
Dermal (LD50)	Rat	> 2.000 mg/kg

Ethylene glycol phenyl ether acrylate (CAS 48145-04-6)

Oral (LD50)	Rat	5000 mg/kg
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Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory sensitization

Not available.

Skin sensitization

May cause an allergic skin reaction.

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

Ethanol (CAS 64-17-5)

Aquatic

Components	Species	Test Results
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

Acetone (CAS 67-64-1)

Fish	LC50 Oncorhynchus mykiss (rainbow trout)	5.540 mg/l - 96 h
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Daphnia and other aquatic invertebrates	LC50	Daphnia magna (Water flea)	8,800 mg/l - 48 h
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**1,6-Hexanediol diacrylate
(CAS 13048-33-4)**

Fish	LC50	Leuciscus idus (Golden orfe)	10mg/l, 96hours
Daphnia and other aquatic	EC50	Daphnia magna (Water flea) -	2.6mg/l, 48hours
Algae	EC50	Desmodesmus subspicatus (Scenedesmus subspicatus)	1.5mg/l, 72hours
Bacteria	EC50	Sludge Treatment	270mg/l, 30 minutes

**Phenylbis (2,4,6-trimethylbenzoyl)
phosphine oxide (CAS 162881-26-7)**

Fish	LC50	Danio rerio (zebra fish)	> 0,09 mg/l - 96 hours
Daphnia and other aquatic invertebrates	LC50	Daphnia magna (Water flea)	> 1,17 mg/l - 48 hours
Algae	EC50	Desmodesmus subspicatus (green algae)	> 0,26 mg/l - 72 hours
Bacteria	EC50	Sludge Treatment	> 100 mg/l - 3 hours

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
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14.2 UN proper shipping name

ADR/RID: Printing Ink	IMDG: Printing Ink	ICAO-IATA/DGR: Printing Ink
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14.3 Transport hazard class(es)

ADR/RID: Class 3	IMDG: Class 3	ICAO-IATA/DGR: Class 3
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14.4 Packing group

ADR/RID: II	IMDG: II	ICAO-IATA/DGR: II
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14.5 Environmental hazards none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user Provisions for dangerous goods (ADR) should be complied within the premises

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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Version #	1.1
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