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**1. Identification of the Substance/Preparation and the Company Undertaking****GHS Product Identifier****Product Name** Ultraviolet Ink Marker**Other Means of Identification****Part Number**

<b>MM-77</b>	00077
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**Recommended use of the chemical and restrictions on use****Recommended Use** Marking in ultraviolet applications**Uses Advised Against** No information available**Supplier's Details****Supplier Address**

Arro-Mark LLC.  
158 West Forest Ave  
Englewood, New Jersey, 07631 USA  
Phone: 201-657-4112  
FAX: 201-567-1373

**Emergency Telephone Number**

Chemtrec                      US 800-424-9300                      International 703-527-3887

**3. COMPOSITION / INFORMATION ON INGREDIENTS****Classification**

This chemical is considered hazardous according to the OSHA Hazard Communications Standard 2012 (29 CFR 1910.1200)

**Physical Hazards**

Flammable Liquids – Category 3

**Health Hazards**

Serious Eye Damage – Category 1

Specific Target Organ Toxicity – Category 3

Carcinogenicity – Category 2

Reproductive Toxicity – Category 2

**GHS Label Elements, including precautionary statements Emergency Overview****Signal Word** – Danger**Hazard Statements –**

H226: flammable liquid and vapor

H318: Causes serious eye damage

H335: May cause respiratory irritation

H336: May cause drowsiness or dizziness

H361: suspected of damaging fertility or the unborn child  
H373: May cause damage to organs through prolonged or repeated exposure (central nervous system, liver, kidney, auditory system)

### **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.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.

#### **Response**

P370+378: In case of fire: Use water spray, carbon dioxide, dry chemical, or alcohol foam for extinction.  
P303+P361+P353: If on skin: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.  
P310: Immediately call a poison center or doctor/physician.  
P304+P340: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P213: Call a poison center or doctor/physician if you feel unwell.

#### **Storage**

P403+P235: Store in a well-ventilated place. Keep cool.  
P233: Keep container tightly closed.  
P405: Store locked up

#### **Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Hazard not Otherwise Classified (HNOC)**

None known.

### **3. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Chemical Name</b>	<b>CAS -No</b>	<b>Weight %</b>	<b>Trade Secret</b>
Solvent Naphtha (petroleum),	64742-95-6	40-50	*
Xylene	1330-20-7	10-20	*
Ethylbenzene	100-41-4	1-10	*
Toluene	108-88-3	<1	*
Amorphous Silica	112945-52-5	<1	*

\* The exact percentage (concentration) of composition has been withheld as a trade secret.

### **4. FIRST AID MEASURES**

#### **Description of necessary first-aid measures**

**General Advice** In case of doubt, or when symptoms persist, seek medical attention. Do not leave victim unattended.

**Eye Contact** Immediately flush eyes with plenty of water for at least fifteen (15) minutes. Remove contact lenses. Get medical attention immediately.

**Skin Contact** Flush skin with plenty of water. Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleanser.

**Inhalation:** Remove to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Ingestion** Seek medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Protection of First Aiders** Use personal protection equipment.

**Most important symptoms/effects, acute and delayed**

**Most important symptoms/effects** Drowsiness, blurred vision if concentrated and inhaled.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Note to physician** Treat symptomatically

**5. FIRE-FIGHTING MEASURES**

FLASH POINT: 115°F (TCC) ASTM D56  
FLAMMABLE LIMITS: LEL 0.9 UEL 6.2

**Suitable Extinguishing Media**

Dry chemical, carbon dioxide, alcohol resistant foam. For large fires, use foam. Shut off flow and allow to burn out.

**Unsuitable extinguishing media** None known.

**Specific Hazards arising from the chemical** Vapors explosive if collected. Vapors are heavier than air and may travel along ground, or be moved by ventilation and be ignited by ignition source. Do not allow run off from fire-fighting to run into drains or water courses. If run-off occurs, notify proper authorities.

**Protective Equipment and Precautions for Firefighters**

Wear appropriate self-contained breathing apparatus MSHA/NIOSH (approved or equivalent) and full protective gear. Cool closed containers exposed to fire with water spray. Avoid inhalation of material or combustion by-products; stay upwind.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Avoid breathing vapors. Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment.

**Environmental Precautions** Avoid release into the environment. Do not allow to enter drains or watercourses. If the product contaminates rivers, lakes or drains, inform respective authorities.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up** Contain the spillage with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth to soak up the product and place in a suitable container for disposal in accordance with the waste regulations

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling**                      Avoid skin and eye contact. Avoid the inhalation of vapor and mist. Keep away from open flame and sources of ignition.

### Conditions for safe storage, including any incompatibilities

**Storage**                      Keep away for open flame, hot surfaces and sources of ignition. Keep containers tightly closed. Observe label precautions. Store between 5-25° C in a dry, well ventilated place. Prevent unauthorized access.

Information on this Material Safety Data Sheets refers to ink used in pens and markers; however, it applies to these inks in bulk. The inks are contained in capillary or valve reservoirs and will not spill or leak under normal conditions

**Incompatible products**      Strong oxidizing and reducing agents, strong alkalis and strong acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Limits

Chemical	Exposure Limit
Solvent Naphtha (petroleum), Light Aromatic	<b>OSHA PEL</b> TWA: 100 ppm <b>ACGIH TLV</b> TWA: 100 ppm
Xylene	<b>OSHA PEL</b> TWA: 100 ppm <b>ACGIH TLV</b> TWA: 100 ppm
Ethylbenzene	<b>OSHA PEL</b> TWA: 100 ppm <b>ACGIH TLV</b> TWA: 100 ppm

### Appropriate engineering controls

**Engineering Measures**      Showers, eyewash stations, ventilation systems

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

**Eye/Face protection**        None under normal use conditions. Avoid eye contact. Wear chemical splash goggles in compliance with OSHA regulation if splashing is possible

**Skin and body Protection**    None under normal use conditions. Avoid repeated or prolonged contact with skin. Wear impervious gloves if needed to prevent possible skin irritation.

**Respiratory Protection**      None under normal use conditions. Use with adequate ventilation. If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn

**Hygiene Measures**            Use in a well-ventilated area. When using do not eat, drink, or smoke. Provide regular cleaning of equipment, work areas and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<u>Property</u>	<u>Value</u>
Boiling Point:	322-340°F
Specific Gravity (H <sub>2</sub> O = 1)	n/a
Vapor Pressure:	n/a
Melting Point:	No data
Vapor Density (Air=1)	4.2
Evaporation (BA=1)	0.27
Solubility in Water:	n/a
Appearance and Odor:	Clear Ink
Odor	Aromatic odor
VoC:	81.6%, 733.29 g/L

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	No data available
<b>Chemical Stability</b>	Stable under normal storage and handling conditions
<b>Possibility of Hazardous reactions</b>	None under normal use
<b>Hazardous Polymerization</b>	Will not occur
<b>Conditions to Avoid</b>	Heat, open flame, sparks, and sources of ignition
<b>Incompatible Materials</b>	Strong oxidizing and reducing agents, strong alkalis and strong acids
<b>Hazardous Decomposition Products</b>	No decomposition if stored and applied as directed.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Product Information**      There is no data available on the product itself.

### Acute Toxicity

<u>Chemical</u>	<u>Result</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
Solvent Naphtha (petroleum), Light Aromatic	LD50 – Oral	Rat	3492 mg/kg	-
	LD50 – Dermal	Rabbit	>3,169 mg/kg	-
	LC50 – Inhalation	Rat	>6193 mg/m <sup>3</sup>	4 hours
Xylene	LD50 – Oral	Rat	>3523 mg/kg	-
	LD50 – Dermal	Rabbit	>4200 mg/kg	-
	LC50 – Inhalation	Rat	>20 mg/l	-
Ethylbenzene	LC50 – Inhalation	Rat	3.5 g/kg	-

### **Eye:**

Armoatic Hydrocarbon – Serious Eye damage. May cause mild, short-lasting discomfort to eyes.  
Xylene – Moderately irritating to eyes.

## 12. ECOLOGICAL INFORMATION

### Toxicity

Aromatic 100:

Pseudokirchneriella Subcapitata

Exposure 72 hours

ErL50 2.9 mg/L

NOELR 1 mg/L

Oncorhynchus Mykiss

LL50 9.2 mg/L

Daphnia Magna

EL50 3.2 mg/L

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Dispose of in accordance with all applicable local, state and federal regulations. Do not allow to enter into drains, water courses or the soil.

**Contaminated Packaging** Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

DOMESTIC HIGHWAY (Containers < 1 Quart are ORM-D)  
PROPER SHIPPING NAME: Ink/Paint, Consumer Commodity  
HAZARD CLASS/SUBSIDIARY HAZARD: 3  
UN/NA NO. UN1263  
PACKING GROUP: III  
LABEL REQUIRED: Flammable Liquid (3)

DOMESTIC AIR SHIPMENTS (PENS)  
PROPER SHIPPING NAME: Consumer Commodity  
HAZARD CLASS/SUBSIDIARY HAZARD: 9  
UN/NA NO. I.D. 8000  
PACKING GROUP: None  
LABEL REQUIRED: Class 9

## 15. Regulatory Information

**OSHA Hazard Communication Standard:** This product is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200

Aromatic Hydrocarbon: Listed or exempt from AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

Xylene: Listed or exempt from AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

Cumene: Cited on the following lists – ACGIH all, OSHA Z, CA p65 CARC, IL RTK, MN RTK, NJ RTK, PA RTK, RI RTK

Pseudocumene: Cited on the following lists – ACGIH all, IL RTK, MN RTK, NJ RTK, PA RTK, RI RTK

Xylene: Cited on the Following lists – ACGIH all, OSHA Z, IL RTK, MI RTK, MN RTK, NJ RTK, PA RTK, RI RTK

Ethylbenzene: Cited on the following lists – IARC 2B, ACGIH ALL, OSHA Z, IL RTK, MI 293, MN RTK, NJ RTK, PA RTK, RI RTK

Ethylene Glycol: EPCRA 311/312: chronic  
Cited on the following lists – MA RTK, NJ RTK, PA RTK

**SARA 311/312:** Fire. Immediate Health. Delayed Health.

## 16. OTHER INFORMATION

Health Hazard 2

Flammability 3

Reactivity 0

Personal Protection B

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**End of Safety Data Sheet**