



# MATERIAL SAFETY DATA SHEET

(In accordance with ISO 11014-1 Standard)

Product Name: Ink Cartridge for Slide Printer and Cassette Printer

Revision Date: 2008-12-01

## 1. Identification of the Substance

**Product Name:** Ink Cartridge for AutoWrite® Slide Printer and Cassette Printer – (product code #8035)

**Manufactured For:** Sakura Finetek USA, Inc.  
Torrance, CA 90501 USA  
Tel: 310-972-7800

**Emergency Telephone Number:**  
800-424-9300 (Chemtrec)

## 2. Composition/Data on Components

Hazardous Component Specific Chemical Identity	CAS #	% WEIGHT	CIEL TWA	OSHA PEL	SYMBOL	R-PHRASE
Diphenyl (2,4,6 trimethylbenzoyl) phosphine oxide	075980-60-8	1-5	NA	NA	Xn N	R62 R51/53
Aromatic urethane acrylate	Proprietary	5-15	NA	NA	Xi	R36
Dipentaerythritol penta/hexa acrylate	29570-58-9 60506-81-2	5-10	NA	NA	Xi	R36 R43
Tris (2-hydroxyethyl) isocyanurate triacrylate	40220-08-4	1-5	NA	NA	Xi	R41
1,6-hexanediol diacrylate	13048-33-4	1-5	NA	NA	Xi	R36/38 R43
Ethoxylated (3) trimethylolpropane triacrylate	28961-43-5	1-5	NA	NA	Xi	R36
Ethoxylated (3) trimethylolpropane triacrylate	28961-43-5	1-5	NA	NA	Xi	R36
Diacrylate of bisphenol A derivative	Proprietary	1-5	NA	NA	Xi	R36
1-methoxy-2-propanol	107-98-2	50-70	NA	NA	Flammable	R10

## 3. Hazards Identification

### EMERGENCY OVERVIEW:

Flammable (R10).

Irritating to eyes and skin (R36/38).

Risk of serious damage to eyes (R41).

May cause sensitization by skin contact (R43).

Toxic to aquatic organisms/may cause long-term adverse health effects in the aquatic environment (R51/53).

Possible risk of impaired fertility (R62).

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### Potential Health Effects:

**EYE CONTACT:** Irritating to eyes.  
**SKIN CONTACT:** May cause irritation including redness or itching and dermatitis.  
**INGESTION:** Potential ingestion hazard.  
**INHALATION:** Suspect respiratory tract irritation hazard.  
**CHRONIC:** Unknown

### HMIS Rating

Health: 2  
Flammability: 3  
Reactivity: 2  
Protection : C

### HMIS Rating Scale

Minimal: 0  
Slight: 1  
Moderate: 2  
High: 3  
Severe: 4

### 4. First Aid Measures

**Inhalation:** Remove to fresh air. Give oxygen or artificial respiration as needed. Seek medical attention.

**Eye Contact:** For even minor eye contact, immediately flush eyes with copious amounts of cool water for 20 minutes retracting eyelids often to ensure thorough washing. Seek medical attention.

**Skin Contact:** Remove contaminated clothing. Wash skin thoroughly with mild soap and rinse with water for about 20 minutes. Do not use organic solvents. Launder contaminated clothing.

**Ingestion:** Never give anything orally to a person who is losing consciousness, unconscious, or convulsing. If conscious, give plenty of water (if possible charcoal slurry) to drink and seek medical advice. Artificial induction of vomiting should be restricted to first aid staff.

**In any case of persistent irritation, seek medical advice.**

### 5. Fire Fighting Measures

**Suitable extinguishing media:** Foam, carbon dioxide, dry chemicals.

**Unsuitable extinguishing media:** High pressure water jet.

**Exposure Hazards:** Do not breath fumes. Risk of formation of toxic products. May polymerise at high temperature. Polymerisation is highly exothermic and may produce sufficient heat to cause thermal decomposition and/or rupture of container. Thermal decomposition can lead to the evolution of irritant vapour or gases and/or fire. Cool the container with sprayed water to avoid polymerization. Eliminate hot points. Fire will produce dense, black, acrid smoke. Do not allow run-off from fire fighting to enter drains or water courses.

**Equipment for firefighters:** Full protective clothing. Self-contained breathing apparatus

**Combustion Products:** Oxides of carbon, nitrogen and sulfur. Toxic gases, vapors.

### 6. Accidental Release Measures

**Personal precautions:** Do not breathe vapour/dust. Wear protective equipment (See Section 8). Remove soaked clothing immediately.

**Environmental precautions:** Do not flush into or allow to enter surface water, sanitary sewer, or ground water system.

**Methods for cleaning up:** Contain spreading. Absorb with mineral filler (e.g. sand, diatomaceous earth), collect and store in a suitable container for disposal according to local regulations.

### 7. Handling and Storage

**Handling:** Use only in well-ventilated areas or wear suitable respiratory equipment. Wear protective equipment (see Section 8). Avoid contact with skin and eyes. Do not eat, drink, or smoke at the workplace. Isolate from sources of heat, sparks, and open flame.

**Storage:** Avoid exposure to direct sunlight, UV radiation, and strong oxidizers. Do not expose to temperatures exceeding 60°C for long periods. Do not store under inert gas.

**Incompatible Materials:** Keep away from oxidizing materials, acids, bases.

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### **8. Exposure Controls/Personal Protection**

**NOTE: Experimental sample- Health effects not fully explored**

**Exposure Limits:** Not tested.  
**Engineering Controls:** Local exhaust ventilation recommended.

#### **PERSONAL PROTECTION**

**Respiratory:** Ensure adequate ventilation or wear suitable respiratory equipment.  
**Hand Protection:** Do not use natural rubber or PVC gloves. Wear nitrile rubber gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.  
**Eye Protection:** Wear a face shield, chemical goggles, or safety glasses. Contact lenses should not be worn.  
**Skin:** Wear suitable protective clothing.  
**Other:** An eye wash facility and safety shower must be available nearby.

### **9. Physical and Chemical Properties**

**Appearance:** Black liquid  
**Odour:** Ether  
**Acidity (mg KOH/g):** Not applicable  
**Boiling Point:** 117-125°C (760 mm Hg)  
**Flash Point:** 30°C (closed cup)  
**Spontaneous Ignition:** 290°C  
**Vapor Pressure:** 1170 Pa  
**Evaporation Rate:** 0.75 BuAc=1  
**Specific Gravity:** ~0.9

#### **SOLUBILITY**

**In Water:** No  
**In Organic Solvents:** Soluble in polar solvents  
**Viscosity:** 7.9 cP @ 25°C

### **10. Stability and Reactivity**

**Conditions to Avoid:** Avoid temperatures higher than 60°C, direct sunlight, exposure to strong UV sources, contact with heat sources, friction with temperature increase as a result, and static discharges.

**Materials to Avoid:** Avoid free radical producing initiators, peroxides, reactive metals, strong acids, strong alkalis, and strong oxidizing agents

**Hazardous Decomposition Products:** Hazardous exothermic polymerization can occur when heated. Hazardous polymerization can occur when exposed to direct sunlight. Oxides of carbon, oxides of nitrogen, and oxides of sulfur. Acid fumes. Toxic gases/vapours.

### **11. Toxicological Information**

**NOTE: Experimental sample- Health effects not fully explored**

**Toxicological Effects and Possible Symptoms after Exposure:** Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms such as redness, blistering, dermatitis, etc. Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness, and central nervous system effects.

**Acute Toxicity:** This formulation has not been tested for acute toxicological effects.

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**INFORMATION ON THE COMPONENTS**

diphenyl(2,4,6- trimethylbenzoyl) phosphine oxide	Acute toxicity: oral: LD50: rat > 2000mg/kg Eye irritation: non-irritant Skin irritation: non-irritant Skin sensitization: non-sensitizing
aromatic urethane acrylate	Can be expected to be an eye irritant OECD irritation index = 0 Draize P.I.I. = 0.7 Skin irritation: well-defined to severe erythema and oedema
dipentaerythritol penta/hexa acrylate	Toxological properties have not been fully determined Eye irritation: reversible corneal opacity, severe redness and oedema Skin irritation: moderate erythema and oedema
tris(2-hydroxyethyl)isocyanurate	Eye irritation: risk of serious damage to eyes Skin irritation: non-irritant
1,6-hexanediol diacrylate	Eye irritation: irritating to eyes Skin irritation: irritating to skin Skin sensitization: may cause sensitization by skin contact
diacrylate of bisphenol A derivative	Toxological properties have not been fully determined Can be expected to be an eye irritant OECD irritation index = 0 Draize P.I.I. = 1.7
ethoxylated (3) trimethylolpropane triacrylate	Acute toxicity: oral: LD50: rat > 2000mg/kg dermal: LD50: rat > 2000mg/kg Eye irritation: irritating to eyes Skin irritation: non-irritant
1-methoxy-2-propanol	Toxic dose:oral: LD50: rat 5660mg/kg

**Subchronic Effects:** This formulation has not been tested for subchronic toxicological effects.

**Chronic Effects/Carcinogenicity:** This formulation has not been tested for chronic toxicological effects.

**Reproductive Effects:** This ink has not been tested for reproductive effects.

**12. Ecological Information**

**Ecotoxicological Information:** No data available for this formulation.

COMPONENT	ACUTE TOXICITY	BIODEGRADABILITY
diphenyl (2,4,6 trimethylbenzoyl) phosphine oxide	Fish: LC50, 48h: 1-10mg/l Daphnia: not tested Bacteria: EC50, 0.5h: >1.0m/l Algae: not tested	Not really biodegradable
1-methoxy-2-propanol	Fish: Practically non-toxic	Readily biodegradable

**Ecotoxic Effects:** Do not discharge into drains or the environment. Dispose to an authorized waste collection point.

**13. Advice on Disposal**

**Measures for Disposal:** Controlled incineration in compliance with local legislation.

**Disposal of Contaminated Packaging:** Treated as per residual chemical.

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### **14. Transport Information**

**Proper Shipping Name:** Printing Ink, Flammable, Environmentally Hazardous Substance

**Flash point:** 23-61°C

**ADR/RID:** Class: 3

UN No.: 1210

Packing group: III

Additional information: 1-METHOXY-2-PROPANOL, DIPHENYL (2,4,6-TRIMETHYLBENZOYL) PHOSPHINOXIDE, HYDROXYPHENONE DERIVATIVE

**IMO:**

Class: 3

UN No.: 1210

Packing group: III

Marine pollutant

Additional information: 1-METHOXY-2-PROPANOL, DIPHENYL (2,4,6-TRIMETHYLBENZOYL) PHOSPHINOXIDE, HYDROXYPHENONE DERIVATIVE

**ICAO:**

Class: 3

UN No.: 1210

Packing group: III

Additional information: 1-METHOXY-2-PROPANOL, DIPHENYL (2,4,6-TRIMETHYLBENZOYL) PHOSPHINOXIDE, HYDROXYPHENONE DERIVATIVE

### **15. Regulatory Information**

**Symbols:**

Xi	Irritant
Xn	Harmful
N	Dangerous for the environment

**R PHRASES:**

R10:	Flammable
R36/38:	Irritating to eyes and skin.
R41:	Risk of serious damage to eyes.
R43:	May cause sensitization by skin contact.
R51/53:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62:	Possible risk of impaired fertility.

**S PHRASES:**

S24:	Avoid contact with skin.
S25:	Avoid contact with eyes.
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28:	After contact with skin, wash immediately with industrial cleanser and cold water.
S36/37/39:	Wear suitable protective clothing, gloves and eye/face protection.
S51:	Use only in well-ventilated areas.
S60:	This material and/or its container must be disposed of as hazardous waste.
S61:	Avoid release to the environment. Refer to special instruction/safety data sheets.

### **16. Other Information**

This Material Safety Data Sheet has been furnished on request. A revised Material Safety Data Sheet will be furnished only if requested, also in case of specification changes. The above information, which is accurate to the best of our knowledge and belief, describes the safety aspects of our product but does not warrant any product properties. The company gives no warranty as to the accuracy or completeness of such information.

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