

**MATERIAL SAFETY DATA SHEET**

**InkSource  
Make-Up Fluid  
16-2535**

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product name** : 16-2535

**Material uses** : Industrial applications: Make-Up fluid for use in a continuous ink jet process. Replaces solvents lost through evaporation during normal ink drop recycling process.

**Emergency phone** : Medical: CALL RMPDC, USA (303) 623-5716  
Transporters: CALL CHEMTREC, USA (800)-424-9300

**Manufacturer** : Marconi Data Systems Inc., 1500 Mittel Boulevard, Wood Dale, IL, 60191-1073 U.S.A  
Phone: 1-800-843-3610 Fax: 1-800-582-1343  
Marconi Data Systems Europe BV., Strijkviertel 39, 3454 PJ De Meern, The Netherlands.  
Phone: 31-030-6693000 Fax: 31-030-6693060

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

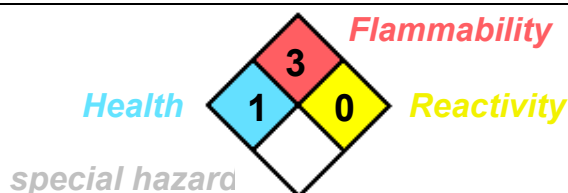
### Information on hazardous ingredients

	<u>CAS No.</u>	<u>Percent (%)</u>	<u>Chemical name</u>
1)	78-93-3	90 - 100	2-Butanone

\* Occupational Exposure Limit(s), if available, are listed in section 8

## 3. HAZARDS IDENTIFICATION

**National Fire Protection Association (U.S.A.)** :



### Effects and symptoms

<u>Chemical name</u>	<u>Effects and symptoms</u>
1) 2-Butanone	Irritating to eyes and respiratory system. Defatting to the skin. Harmful by inhalation, in contact with skin and if swallowed. Can cause dizziness, lightheadedness, headache, nausea, and blurred vision. Can cause CNS depression.

## 4. FIRST AID MEASURES

**Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

**Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Skin contact** : Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

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## 5. FIRE-FIGHTING MEASURES

- Extinguishing media** : Flammable liquid, soluble or dispersed in water.  
SMALL FIRE: Use DRY chemical powder.  
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
- Special fire-fighting procedures** : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Hazardous thermal decomposition products** : These products are carbon oxides (CO, CO<sub>2</sub>).
- Protection of fire-fighters** : Be sure to use an approved/certified respirator or equivalent.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
- Environmental precautions and clean-up methods** : Flammable liquid.  
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

## 7. HANDLING AND STORAGE

- Handling** : Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. If ingested, seek medical advice immediately and show the container or the label.
- Storage** : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).
- Packaging materials** : Use original container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

### Occupational Exposure Limits

<u>Chemical name</u>	<u>Exposure limits</u>
1) 2-Butanone	1) United States ACGIH STEL 15 minutes 300 ppm 2) United States ACGIH TWA 8 hours 200 ppm 3) United States OSHA TWA 8 hours 200 ppm

### Personal Protective Equipment

- Respiratory system** : Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Skin and body** : Lab coat.
- Hands** : Impervious gloves.
- Eyes** : Splash goggles.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state and appearance** : Liquid.
- Color** : Clear
- Odor threshold** : The highest known value is 10 ppm. Weighted average: 10 ppm.
- Boiling point** : The lowest known value is 80 °C. Weighted average: 80 °C.
- Melting point** : May start to solidify at -87 °C. Weighted average: -87 °C.
- Specific gravity** : 0.8 (Water = 1)
- Vapor density** : 2.5 (Air = 1)
- Vapor pressure** : The highest known value is 71 mmHg at 20°C. Weighted average: 71 mmHg at 20°C.
- Evaporation rate (butyl acetate = 1)** : The highest known value is 7.1. Weighted average: 7.1.

<b>Solubility</b>	: Easily soluble in methanol, diethyl ether, n-octanol, acetone. Soluble in cold water, hot water.
<b>Octanol/water partition coefficient</b>	: The product is more soluble in oil.
<b>Flash point</b>	: -3 °C.
<b>Autoignition temperature</b>	: The lowest known value is 515 °C. Weighted average: 515 °C.
<b>Flammable limits</b>	: The lowest known value is 2.0%. The highest known value is 10.0%.
<b>Volatility (w/w)</b>	: 100 %.
<b>VOC Volatility (w/w) - less exempt volatile.</b>	: 100 %.

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	: The product is stable.
<b>Conditions and materials to avoid</b>	: Not available.
<b>Hazardous reactions</b>	: Slightly reactive to reactive with oxidizing agents, reducing agents, acids, alkalis.
<b>Hazardous decomposition products</b>	: These products are carbon oxides (CO, CO <sub>2</sub> ).

## 11. TOXICOLOGICAL INFORMATION

<u>Chemical name</u>	<u>Toxicological Information</u>
1) 2-Butanone	1) LD50 Oral Rat: 2737 mg/kg 2) LD50 Oral Mouse: 2190 mg/kg 3) LD50 Oral Mouse: 4050 mg/kg 4) LD50 Dermal Rabbit: 6480 mg/kg 5) LC50 Inhalation vapor Rat: 23500 mg/m <sup>3</sup> 8 hours 6) LCLo Inhalation vapor Female. Rat Fetotoxicity and developmental abnormalities (homeostasis) in rats.: 1000 ppm 1 hours

## 12. ECOLOGICAL INFORMATION

<b>Persistence/degradability</b>	: Not available.
<b>Ecotoxicity</b>	: Not available.
<b>California, VOC Content</b>	: 800 grams volatile organic / liter less water or exempt volatile.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal methods</b>	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
<b>RCRA waste code</b>	: Not available.

## 14. TRANSPORT INFORMATION

<b>UN number</b>	: UN1193
<b>Proper shipping name</b>	: Methyl ethyl ketone
<b>TDG classification</b>	: 3
<b>Packing group</b>	: II

## 15. REGULATORY INFORMATION

<b>CERCLA</b>	: The following product(s) is (are) listed by CERCLA: 2-Butanone (90 - 100%)
<b>SARA 313</b>	: The following product(s) is (are) listed on SARA 313: 2-Butanone (90 - 100%)
<b>California prop. 65</b>	: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: None.

## 16. OTHER INFORMATION

**Date of issue** : September 17, 2001  
**Prepared by** : Garth Studebaker, CSP  
**Version** : 2.12

### Notice to Reader

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