



# Material Safety Data Sheet

Material Name: **BioMG Mimaki JV5™ JV33™** C/M/Y/K/FF/Lc/Lm

MSDS ID: BioMG MMK5\_33

Printing Date: 02.01.09

## 1. Chemical Product and Company Identification

**Product Code:** BioMG INK(MMK)

**Chemical Name:** Inkjet Printing ink

**Product Use:** Printing ink

**Manufacturer Information:**

MegaInk Digital A.S.

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## 2. Composition / Information on Ingredients

### Chemical characterization

**Description:** Mixture of the substances listed below with nonhazardous additions.

<b>Dangerous components:</b>		
	<i>2-butoxyethyl acetate</i>	30-60%
<i>EINECS: 211-694-19</i>	<i>Ethyl (S)-2-hydroxypropionate</i>	10-20%
<i>EINECS: 204-658-1</i>	<i>n-butyl acetate</i>	10-20%
	<i>Glycol Ether DPM Acetate</i>	2-10%
<i>1333-86-4</i>	<i>Carbon black</i>	0-5 %

## 3. Hazards Identification

**Physical State:** Liquid

**Colors:** Cyan, Magenta, Yellow, Black, Cyan-Lt, Magenta-Lt

**Odor:** Sweet Solvent Odor.

### Emergency Overview

Combustible liquid. Closed containers exposed to heat and fire may build pressure and explode.

This product is irritating to the eyes, respiratory system and skin.

### Potential Health Effects: Eyes

Avoid contact with eyes. Contact can cause moderate to severe irritation and possible injury to the eyes.

### Potential Health Effects: Skin

Avoid contact with skin. Prolonged and/or repeated skin contact may result in mild irritation or redness.

### Potential Health Effects: Ingestion

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

### Potential Health Effects: Inhalation

Avoid breathing vapors or mists of this product. Inhalation of vapors or mists of the product may be irritating to the respiratory system.

**HMIS Ratings: Health: 1 Fire: 2 Physical Hazard: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## 4. First Aid Measures

### · **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

### · **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Generally the product does not irritate the skin.

### · **After eye contact:**

Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

## 5. Fire Fighting Measures

### **General Fire Hazards**

See Section 9 - PHYSICAL & CHEMICAL PROPERTIES for Flammability Properties.

Flammable liquid. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.

### **Hazardous Combustion Products**

See Section 10 - STABILITY and REACTIVITY for hazardous combustion and thermal decomposition information.

### **Extinguishing Media**

Alcohol foam. Dry chemical. Carbon dioxide. Use water to cool fire-exposed containers and to protect personnel.

### **Fire Fighting Equipment/Instructions**

Firefighters should wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus and face mask.

**NFPA Ratings: Health: 1 Flammability: 2 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## 6. Accidental Release Measures

### **Evacuation Procedures**

Evacuate spill area of unprotected and untrained personnel. Ventilate the contaminated area. Remove or disable all sources of ignition.

### **Containment Procedures**

Contain the discharged material. Dike the spilled material, where this is possible. Cover with inert absorbent such as dry clay, sand, diatomaceous earth or commercial sorbents. Scoop up used absorbent into drums or other appropriate container.

### **Personal Precautions**

Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills.

### **Clean-Up Procedures**

Wear appropriate protective equipment and clothing during clean-up.

### **Special Procedures**

Regulations vary. Consult local authorities before disposal. Follow all Local, State, Federal and Provincial regulations for disposal.

## 7. Handling and Storage

· **Handling:**

· **Information for safe handling:**

Ensure good ventilation/exhaust at the workplace.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep container tightly sealed.

## 8. Exposure Controls / Personal Protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require *monitoring at the workplace*:**

**2-butoxyethyl acetate**

<b>REL</b>	33 mg/m <sup>3</sup> , 5 ppm Skin
<b>TLV</b>	130 mg/m <sup>3</sup> , 20 ppm

**n-butyl acetate**

<b>PEL</b>	710 mg/m <sup>3</sup> , 150 ppm
<b>REL</b>	Short-term value: 950 mg/m <sup>3</sup> , 200 ppm Long-term value: 710 mg/m <sup>3</sup> , 150 ppm
<b>TLV</b>	Short-term value: 950 mg/m <sup>3</sup> , 200 ppm Long-term value: 713 mg/m <sup>3</sup> , 150 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Avoid skin contact. Disposable neoprene or nitrile gloves may be used to guard against momentary exposure.



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/

the

preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the

degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses with side shields is minimum protective equipment when handling ink. Face shield or tightly sealed goggles is best practice.



## 9. Physical & Chemical Properties

· <b>General Information</b>
<b>Form:</b> Fluid <b>Color:</b> According to product specification <b>Odor:</b> Characteristic
· <b>Change in condition</b> <b>Melting point/Melting range:</b> Undetermined <b>Boiling point/Boiling range:</b> 124°C (255°F)
· <b>Flash point:</b> 60°C (140°F)
· <b>Ignition temperature:</b> 280°C (536°F)
· <b>Auto igniting:</b> Product is not self igniting.
· <b>Danger of explosion:</b> Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b> <b>Lower:</b> 1.2 Vol % <b>Upper:</b> 11.4 Vol %
· <b>Vapor pressure at 20°C (68°F):</b> 10.7 hPa (8 mm Hg)
· <b>Density:</b> Not determined.
· <b>Solubility in / Miscibility with</b> <b>Water:</b> Not miscible or difficult to mix.
· <b>Solvent content:</b> <b>Organic solvents:</b> 77,8 % <b>VOC content:</b> 77,8 % 777,6 g/l / 6.49 lb/gl
· <b>Solids content:</b> 2.2 %

## 10. Chemical Stability & Reactivity Information

**Chemical Stability**

Stable under normal temperature and conditions.

**Chemical Stability: Conditions to Avoid**

Keep away from heat, ignition sources and incompatible materials. Avoid freezing. Avoid contact with strong oxidizers.

**Incompatibility**

This product may react with strong oxidizing agents.

**Hazardous Decomposition**

Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

## 11.Toxicological Information

**Acute Dose Effects**

Toxicology studies on humans and/or animals have not been conducted on this product/product family.

**Component Analysis - LD50/LC50**

**Ethyl lactate (97-64-3)**

Oral LD50 Rat: >5 g/kg; Dermal LD50 Rabbit: >5 g/kg

**Polymeric Resin (Proprietary)**

Oral LD50 Rat: >5 g/kg

**Carbon black (1333-86-4)**

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

**Carcinogenicity**

No carcinogenicity data available for this product.

**A: General Product Information**

No carcinogenicity data available for this product.

**B: Component Carcinogenicity**

**Carbon black (1333-86-4)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen  
NIOSH: potential occupational carcinogen (in presence of polycyclic aromatic hydrocarbons)  
IARC: Monograph 65, 1996 (Group 2B (possibly carcinogenic to humans))

## 12.Ecological Information

**· General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13.Disposal Considerations

**· Product:**

**· Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**· Uncleaned packagings:**

**· Recommendation:** Disposal must be made according to official regulations.

## 14.Transportation Information

**US DOT Information**

**Shipping Name:** Not regulated as hazardous material.

**IATA Information**

**Shipping Name:** Not regulated as dangerous goods.

## 15.Regulatory Information

· Sara

· <b>Section 355 (extremely hazardous substances):</b>
None of the ingredient is listed.
· <b>Section 313 (Specific toxic chemical listings):</b>
N-methyl-2-pyrrolidone
· <b>TSCA (Toxic Substances Control Act):</b>
2-butoxyethyl acetate
2-methoxy-1-methylethyl acetate
n-butyl acetate
N-methyl-2-pyrrolidone
· <b>Proposition 65</b>
· <b>Chemicals known to cause cancer:</b>
N-methyl-2-pyrrolidone
· <b>Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.
· <b>Chemicals known to cause developmental toxicity:</b>
N-methyl-2-pyrrolidone
· <b>Carcinogeny categories</b>
· <b>EPA (Environmental Protection Agency)</b>
None of the ingredients is listed.
· <b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.
· <b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.
· <b>TLV (Threshold Limit Value established by ACGIH)</b>
None of the ingredients is listed.
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
None of the ingredients is listed.
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
None of the ingredients is listed.

## 16.Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State, Provincial and local laws.

It does not replace any precautionary language or use and disposal information which accompanies the product. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. It is subject to revision from time to time.