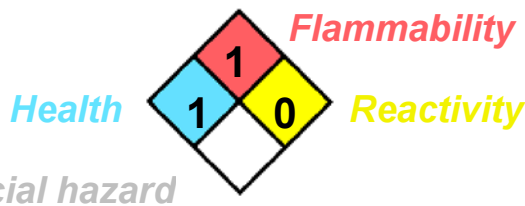


1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : 21-1000
Synonyms : Product code: 21-1000-Q
Material uses : Industrial applications: Ink for use in a drop-on-demand printing process.
Emergency telephone number : Medical: CALL RMPDC, USA (303) 623-5716
 Transporters: CALL CHEMTREC, USA (800)-424-9300
Manufacturer : Videojet Technologies Inc., 1500 Mittel Boulevard, Wood Dale, IL, 60191-1073 U.S.A
 Phone: 1-800-843-3610 Fax: 1-800-582-1343
 Videojet Technologies Europe BV., Strijkviertel 39, 3454 PJ De Meern, The Netherlands.
 Phone: 31-030-6693000 Fax: 31-030-6693060

2. HAZARDS IDENTIFICATION

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



Emergency overview : CAUTION! EYE AND SKIN IRRITANT: Avoid contact with eyes and skin. May be harmful or fatal if swallowed. If inhaled remove to fresh air. If splashed in eyes flush with water. If contacts skin flush with water and wash with mild soap. In medical emergency call Poison Control Center (USA 1-303-623-5716) and a physician. Read MSDS before using.

Effects and symptoms

<u>Chemical name</u>	<u>Effects and symptoms</u>
1) Glycerin	Slightly irritating to the eyes. Can cause gastrointestinal disturbances.
2) 2-Butoxyethanol	Adverse health effects could include the following: kidney abnormalities Irritating to eyes and skin. Absorbed through skin. Can cause gastrointestinal disturbances. Harmful by inhalation, in contact with skin and if swallowed. May cause damage to the following organs: blood system, kidneys, liver.
3) Ethanol, 2-(2-butoxyethoxy)-	Irritating to eyes. Slightly irritating to the skin. Absorbed through skin. Adverse health effects could include the following: cyanosis, kidney abnormalities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

<u>CAS number</u>	<u>Percent (%)</u>	<u>Chemical name</u>
1) 56-81-5	7 - 13	Glycerin
2) 111-76-2	3 - 7	2-Butoxyethanol
3) 112-34-5	3 - 7	Ethanol, 2-(2-butoxyethoxy)-

Occupational exposure limits, if available, are listed in section 8.

4. FIRST AID MEASURES

- Inhalation** : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Skin contact** : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms appear.
- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

- Extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Special fire-fighting procedures** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Unusual fire/explosion hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
- Protection of fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

- Handling** : Do not reuse container. Refer to and follow equipment manual for operation and maintenance procedures.
- Storage** : Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
- Packaging materials** : Use original container.

Continued on next page

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

<u>Chemical name</u>	<u>Occupational exposure limits</u>
1) Glycerin	1) United States ACGIH TLV TWA 8 hours 10 mg/m ³ 2) United States OSHA PEL TWA 8 hours 5 mg/m ³ 3) United States OSHA PEL TWA 8 hours 15 mg/m ³
2) 2-Butoxyethanol	1) United States ACGIH TWA 8 hours 20 ppm (Skin) (1996) 2) United States OSHA TWA 8 hours 50 ppm (Skin) (1994)
3) Ethanol, 2-(2-butoxyethoxy)-	No exposure limit value known.

Engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory system	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Skin and body	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid.
Color	: Black.
Odor threshold	: Highest known value: 0 ppm. Weighted average: 0 ppm.
Boiling point	: Lowest known value: 99 °C. Weighted average: 127 °C.
Melting point	: May start to solidify at the following temperature: 18 °C. Weighted average: -3 °C.
Specific gravity	: 1.012 (Water = 1)
Vapor density	: Lowest known value: <0.6. Highest known value: >3.2. (Air = 1)
Vapor pressure	: Highest known value: 17 mm Hg at 20°C. Weighted average: 14 mm Hg at 20°C.
Evaporation rate (butyl acetate = 1)	: Highest known value: 0.4. Weighted average: 0.3.
Solubility	: Easily soluble in the following materials: cold water, hot water, methanol, diethyl ether, n-octanol and acetone.
Flash point	: Not applicable.
Flammable limits	: Not applicable.
Volatility (w/w)	: 95 %.
VOC Volatility (w/w) - less exempt volatile.	: 18 %.

10. STABILITY AND REACTIVITY

- Stability** : The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

<u>Chemical name</u>	<u>Toxicological information</u>
1) Glycerin	1) LD50 Oral Rat: 12600 mg/kg 2) LD50 Oral Mouse: 4090 mg/kg 3) LD50 Oral Guinea pig: 7750 mg/kg 4) LD50 Dermal Rabbit: >10000 mg/kg
2) 2-Butoxyethanol	1) LD50 Oral Rat: 470 mg/kg 2) LD50 Oral Mouse: 1230 mg/kg 3) LD50 Oral Rabbit: 300 mg/kg 4) LD50 Dermal Rabbit: 220 mg/kg 5) LD50 Dermal Guinea pig: 230 mg/kg 6) LD50 Oral Rat: 470 mg/kg 7) LD50 Oral Mouse: 1230 mg/kg 8) LD50 Oral Rabbit: 300 mg/kg
3) Ethanol, 2-(2-butoxyethoxy)-	1) LD50 Oral Rat: 5660 mg/kg 2) LD50 Oral Rabbit: 2200 mg/kg 3) LD50 Oral Mouse: 2400 mg/kg 4) LD50 Dermal Rabbit: 2700 mg/kg

12. ECOLOGICAL INFORMATION

- Ecotoxicity** : No known significant effects or critical hazards.
- Heavy Metals** : Total concentration: Pb, Hg, Cd, Cr(VI) < 100 ppm
- California, VOC Content** : 827 grams volatile organic / liter less water or exempt volatile.

13. DISPOSAL CONSIDERATIONS

- Waste disposal** : Waste must be disposed of according to applicable regulations. Small quantities of waste may best be handled using a 'lab pack' service offered by a licensed waste disposal firm.

14. TRANSPORT INFORMATION

- Proper shipping name** : Not regulated.

15. REGULATORY INFORMATION

- CERCLA: Hazardous substances.** : The following components are listed: 2-Butoxyethanol (3 - 7%); Ethanol, 2-(2-butoxyethoxy)- (3 - 7%)
- SARA 313** : The following components are listed: 2-Butoxyethanol (3 - 7%); Ethanol, 2-(2-butoxyethoxy)- (3 - 7%)
- California Prop. 65** : This product contains a chemical or chemicals known to the state of California to cause cancer. The following components are listed: sodium 2-biphenylate (< 0.008%).
- Tariff Code - harmonized system** : 3215.11 Printing ink: Black.
USA ...00.60
EU ...00.00

16. OTHER INFORMATION

Date of issue : January 11, 2008
Prepared by : Garth Studebaker, CSP
Version : 7.01

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

English (US)