

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

Product name	: NP-Ink Black
Synonyms	: Product Code : 20133, 20144, 20146, 20711, 20718
Material uses	: Industrial applications: Ink for use on nonporous substrates in a drop-on-demand printing process.
Emergency phone	: 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. COMPOSITION / INFORMATION ON INGREDIENTS

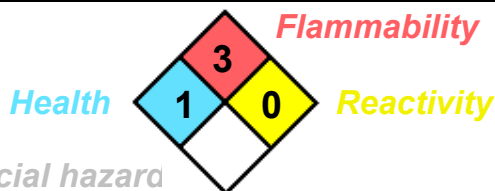
Information on hazardous ingredients

	<u>CAS No.</u>	<u>Percent (%)</u>	<u>Chemical name</u>
1)	71-23-8	1 - 3	1-Propanol
2)		1 - 3	Colorant, Organometallic Compound, Cobalt
3)	64-17-5	80 - 90	Ethanol
4)	67-63-0	3 - 7	Isopropyl alcohol

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

3. HAZARDS IDENTIFICATION

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



Emergency Overview

: **WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL.** Keep away from flame, heat, and static discharge sources. Irritant and central nervous system depressant: Avoid inhalation of vapors and 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) 1-Propanol	May cause irritation of respiratory tract, coughing, shortness of breath. Irritating to skin. Absorbed through skin. Severely irritating to the eyes. Inhalation and Ingestion : Can cause CNS depression. Can cause dizziness, lightheadedness, headache, nausea, and blurred vision. May cause loss of consciousness/coma and death . Repeated or prolonged contact with irritants may cause dermatitis.
2) Colorant, Organometallic Compound, Cobalt	Possible cancer hazard based on animal data. (International Agency for Research on Cancer.) Studies do not confirm increased risk of cancer in exposed humans.
3) Ethanol	May cause irritation of respiratory tract, coughing, shortness of breath. Slightly irritating to the skin. Absorbed through skin. Moderately irritating to the eyes. Inhalation and ingestion may cause drowsiness, dizziness, incoordination and other effects of intoxication. May cause loss of consciousness/coma and death . Medical conditions aggravated by overexposure: liver kidneys gastro-intestinal tract respiratory system cardiovascular system and central nervous system .
4) Isopropyl alcohol	May cause irritation of respiratory tract, coughing, shortness of breath. Slightly irritating to the skin. Absorbed through skin. Moderately irritating

to the eyes. Ingestion : Exposure can cause nausea, headache and vomiting. Inhalation and Ingestion : Can cause CNS depression. Can cause dizziness, lightheadedness, headache, nausea, and blurred vision. May cause loss of consciousness/coma and death . Repeated or prolonged contact with irritants may cause dermatitis.

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. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Eye contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

5. FIRE-FIGHTING MEASURES

- Extinguishing media** : Flammable liquid, insoluble in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use 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, CO₂), sulfur oxides (SO₂, SO₃...), halogenated compounds.
- 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** : Toxic flammable liquid, insoluble or very slightly soluble in water. 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 get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

7. HANDLING AND STORAGE

- Handling** : Keep locked up. 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. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis.
- 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, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Occupational Exposure Limits**

Chemical name	Exposure limits
1) 1-Propanol	1) United States ACGIH STEL 15 minutes 250 ppm (Skin) 2) United States ACGIH TLV 8 hours 200 ppm (Skin) 3) United States OSHA TWA 8 hours 200 ppm
2) Colorant, Organometallic Compound, Cobalt	No established limits.
3) Ethanol	1) United States ACGIH TWA 8 hours 1000 ppm 2) United States OSHA TWA 8 hours 1000 ppm
4) Isopropyl alcohol	1) United States ACGIH TWA 8 hours 400 ppm 2) United States ACGIH STEL 15 minutes 500 ppm 3) United States OSHA TWA 8 hours 400 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	: Gloves.
Eyes	: Safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance	: Liquid.
Color	: Black.
Odor	: Alcohol like.
Odor threshold	: The highest known value is 100 ppm. Weighted average: 94 ppm.
Boiling point	: The lowest known value is 78 °C. Weighted average: 79 °C.
Melting point	: May start to solidify at -88 °C. Weighted average: -112 °C.
Specific gravity	: 0.82 (Water = 1)
Vapor density	: The highest known value is 2.1. The lowest known value is 1.6. (Air = 1)
Vapor pressure	: The highest known value is 44 mmHg at 20°C. Weighted average: 42 mmHg at 20°C.
Evaporation rate (butyl acetate = 1)	: The highest known value is 1.7. Weighted average: 1.7.
Solubility	: Easily soluble in methanol, acetone. Soluble in diethyl ether. Partially soluble in n-octanol. Insoluble in cold water, hot water.
Octanol/water partition coefficient	: The product is more soluble in oil.
pH	: Not applicable.
Flash point	: 12 °C.
Autoignition temperature	: The lowest known value is 371 °C. Weighted average: 398 °C.
Flammable limits	: The lowest known value is 2.0%. The highest known value is 19.0%.
Volatility (w/w)	: 93 %.
VOC Volatility (w/w) - less exempt volatile.	: 93 %

10. STABILITY AND REACTIVITY

Stability	: The product is stable.
Conditions and materials to avoid	: Not available.
Hazardous reactions	: Reactive with oxidizing agents, reducing agents, acids, alkalis. Slightly reactive to reactive with metals.
Hazardous decomposition products	: These products are carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...), halogenated compounds.

11. TOXICOLOGICAL INFORMATION

<u>Chemical name</u>	<u>Toxicological Information</u>
1) 1-Propanol	1) LD50 Oral Rat: 1870 mg/kg 2) LD50 Oral Rabbit: 2825 mg/kg 3) LD50 Oral Mouse: 6800 mg/kg 4) LD50 Dermal Rabbit: 5040 mg/kg 5) LDLo Oral Mammal: 5000 mg/kg 6) LDLo Dermal Mammal: 5000 mg/kg 7) LCLo Inhalation vapor Rat: 4000 ppm 4 hours
2) Colorant, Organometallic Compound, Cobalt	1) LD50 Oral Rat: 5000 mg/kg 2) LD50 Dermal Rabbit: 2000 mg/kg
3) Ethanol	1) LD50 Oral Rat: 7060 mg/kg 2) LD50 Oral Mouse: 3450 mg/kg 3) LD50 Oral Rabbit: 6300 mg/kg 4) LC50 Inhalation vapor Rat: 20000 ppm 10 hours 5) LCLo Inhalation vapor Dog: 5500 ppm hours 6) LCLo Inhalation vapor Guinea pig: 21900 ppm hours
4) Isopropyl alcohol	1) LD50 Oral Rat: 5045 mg/kg 2) LD50 Oral Rabbit: 6410 mg/kg 3) LD50 Oral Mouse: 3600 mg/kg 4) LD50 Dermal Rabbit: 12800 mg/kg

12. ECOLOGICAL INFORMATION

Persistence/degradability	: Not available.
Ecotoxicity	: Not available.
California, VOC Content	: 762 grams volatile organic / liter less water or exempt volatile.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

UN number	: UN1210
Proper shipping name	: Printing Ink
TDG classification	: 3
Packing group	: II

15. REGULATORY INFORMATION

CERCLA	: The following product(s) is (are) listed by CERCLA: Colorant, Organometallic Compound, Cobalt (1 - 3%)
SARA 313	: The following product(s) is (are) listed on SARA 313: Colorant, Organometallic Compound, Cobalt (1 - 3%)
California prop. 65	: 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	: August 20, 2002
Prepared by	: John Dingess
Version	: 6

Notice to Reader

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