

Safety Data Sheet

Videojet®

Ink

16-5020Q



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Version	: GHS (US) ENGLISH
Version number	: 6.04
Date of issue/ Date of revision	: 12/6/2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	: 16-5020Q
CAS number	: Not applicable.

1.2 Relevant identified uses of the substance or mixture and uses advised against



Material uses	: Industrial applications: Ink for use in a continuous ink jet process.
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1.3 Details of the supplier of the safety data sheet

Website: www.videojet.com
Email: FluidsSupport@videojet.com

Videojet Technologies Inc., 1500 Mittel Boulevard, Wood Dale, IL, 60191-1073 U.S.A
Tel: 1-800-843-3610 Fax: 1-800-582-1343

1.4 Emergency telephone number

Medical	 3E: (US) +1 866 519 4752 3E Code: 334466
Transporters	 CHEMTREC: (US) +1 800 424 9300 CHEMTREC Code: CCN 23846

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification

1) EYE IRRITATION - Category 2A	Causes serious eye irritation.
2) AQUATIC HAZARD (ACUTE) - Category 3	Harmful to aquatic life.

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 0%.

Ingredients of unknown ecotoxicity : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 6%

2.2 Label elements

GHS label elements



Warning. Causes serious eye irritation. Harmful to aquatic life. Wear eye or face protection. Avoid release to the environment. If eye irritation persists: Get medical attention.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	CAS #	%	GHS Classification
1) 2-(2-butoxyethoxy)ethanol	112-34-5	8 - <13	EYE IRRITATION - Category 2A
2) 2-pyrrolidone	616-45-5	1 - <3	EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 1B SKIN CORROSION - Category 1B
3) ammonia	1336-21-6	<1	SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 1

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : 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.

Special protective equipment for 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 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.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : 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.

6.4 Reference to other sections

See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
2-(2-butoxyethoxy)ethanol	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
2-pyrrolidone	None.
ammonia	OSHA PEL 1989 (United States, 3/1989). [Ammonia] STEL: 35 ppm 15 minutes. STEL: 27 mg/m ³ 15 minutes. OSHA PEL (United States, 5/2018). [Ammonia] TWA: 50 ppm 8 hours. TWA: 35 mg/m ³ 8 hours.

Biological exposure indices

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Hand protection	: Recommended: EN374 K May be used (Short term exposure): Latex gloves. Nitrile gloves. Use gloves only once. Gloves should be replaced regularly and if there is any sign of damage to the glove material. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapor filter (Type A), ammonia filter (Type K) Additional information: In situations where misting or flying may occur, use appropriate certified respirators. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Black.
Odor	: Not available.
Odor threshold	: Not available.
pH	: 9.5 [OECD 122]
Melting point/freezing point	: Estimated.: ≤ -70 °C [IP 16/97] (2-(2-butoxyethoxy)ethanol).
Initial boiling point and boiling range	: Estimated.: ≥ 225 °C (2-(2-butoxyethoxy)ethanol).
Flash point	: >100 °C [ASTM D 93]
Evaporation rate (butyl acetate = 1)	: Estimated.: ≤ 0 [butyl acetate = 1] (2-(2-butoxyethoxy)ethanol).
Flammability (solid, gas)	: Not applicable. (Liquid)
Upper/lower flammability or explosive limits	: Estimated.: ≥ 0.8 % (2-(2-butoxyethoxy)ethanol). Estimated.: ≤ 9 % (2-(2-butoxyethoxy)ethanol).
Vapor pressure	: Estimated.: ≤ 0 kPa (0 mm Hg) at 20°C (2-(2-butoxyethoxy)ethanol).
Vapor density	: Estimated.: ≥ 3 [Air = 1] (2-pyrrolidone).
Relative density (Water = 1)	: 1.02 [OECD 109]
Solubility(ies)	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Thermally stable.
Viscosity	: Not available.
Explosive properties	: Not applicable. Not classified.
Oxidizing properties	: Not applicable. Not classified.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

9.2 Other information

Volatility (w/w) :93 %.

VOC Volatility (w/w) :18 %.

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

No specific data.

10.5 Incompatible materials

No specific data.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2764 mg/kg	-
	LDLo Oral	Rat	>5000 mg/kg	-
2-pyrrolidone	LD50 Oral	Rat	8000 mg/kg	-
	LDLo Dermal	Rabbit	>2000 mg/kg	-
ammonia	LD50 Oral	Rat	350 mg/kg	-

Conclusion/Summary : Not classified. No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : Not classified. No known significant effects or critical hazards.

Eyes : Causes serious eye irritation.

Respiratory : Not classified. No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : Not classified. No known significant effects or critical hazards.

Respiratory : Not classified. No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : Not classified. No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : Not classified. No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not classified. No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ammonia	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not classified. No known significant effects or critical hazards.

Aspiration hazard

Conclusion/Summary : Not classified. No known significant effects or critical hazards.

Potential chronic health effects. Other

Conclusion/Summary : No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-butoxyethoxy)ethanol	Acute EC50 >100 mg/l	Algae - <i>Desmodesmus subspicatus</i>	96 hours
	Acute EC50 4950 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Chronic NOEC >100 mg/l	Algae - <i>Desmodesmus subspicatus</i>	96 hours
2-pyrrolidone	Acute EC50 >500 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 >500 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 >4600 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours
	Chronic EC10 22.2 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-(2-butoxyethoxy)ethanol	-	-	Readily
2-pyrrolidone	-	-	Readily
ammonia	-	-	Readily

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	Low
2-pyrrolidone	-0.71	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : None.

SECTION 14: Transport information

	UN	IMDG	IATA	US DOT
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user

No special measures required.

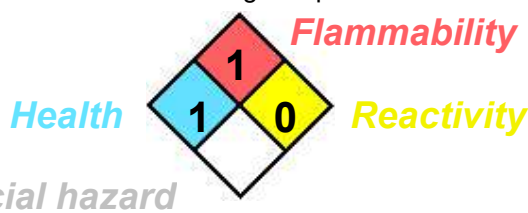
14.7 Transport in bulk according to IMO instruments

Not available.

SECTION 15: Regulatory information

- CERCLA: Hazardous substances.** : The following components are listed: 2-(2-butoxyethoxy)ethanol (8 - <13%); 2-(2-ethoxyethoxy)ethanol (1 - <3%)
- SARA 313** : The following components are listed: 2-(2-butoxyethoxy)ethanol (8 - <13%); 2-(2-ethoxyethoxy)ethanol (1 - <3%)
- California Prop. 65** : This product contains a chemical or chemicals known to the state of California to cause cancer. The following components are listed: styrene (<0.01%).

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




Tariff Code - harmonized system : 3215.11 Printing ink: Black.
USA ...90.60
EU ...90.90

Heavy Metals : Total concentration: Pb, Hg, Cd, Cr(VI) < 100 ppm

California, VOC Content : 761 grams volatile organic / liter less water or exempt volatile.

Chemical Weapons Convention List Schedule I Chemicals	Chemical Weapons Convention List Schedule II Chemicals	Chemical Weapons Convention List Schedule III Chemicals
Not listed	Not listed	Not listed

SECTION 16: Other information

Revision comments :  Indicates information that has changed from previously issued version.

**Abbreviations and
acronyms**

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Procedure used to derive the classification

Classification	Justification
EYE IRRITATION - Category 2A	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method

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.