

SAFETY DATA SHEET

Videojet®
Ink
16-1200Q



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Version	: AU ENGLISH
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : 16-1200Q
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.

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

Aldus Pty Ltd, 1 Rhodes St, West Ryde, NSW 2114, Australia
Tel: +61 1300 018 330 Email: sales@tronics.com.au

Aldus - Tronics (NZ) Ltd, Unit 3, 23-25 Highbrook Dr, East Tamaki, Auckland, New Zealand
Tel: +64 9 588 4072 Email: sales@tronics.co.nz

1.4 Emergency telephone number

Medical ☎ 3E (AU): +61 1800 686 951 / +61 02 8036 3166
3E Code: 334466
Transporters ☎ 3E (AU): +61 1800 686 951 / +61 02 8036 3166
3E Code: 334466

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

1)	Causes skin irritation.
2)	Causes serious eye irritation.

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: 8%

2.2 Label elements



Warning. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Wear protective gloves.

Hazardous ingredients : 2,4,7,9-tetramethyldec-5-yne-4,7-diol (CAS 126-86-3, EC 204-809-1); maleic anhydride (CAS 108-31-6, EC 203-571-6).

Supplemental label elements : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 3: Composition/information on ingredients

Substance/mixture :

Product/ingredient name	Identifiers	%	Classification	Type
2-(2-ethoxyethoxy)ethanol	111-90-0	5 - <10	Not classified.	[2]
2-(2-butoxyethoxy)ethanol	112-34-5	2 - <5	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	[1] [2]
morpholine	110-91-8	1 - <3	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	[1] [2]

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

See Section 16 for the full text of the H statements declared above.

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. Continue to rinse for at least 10 minutes. Get medical attention. 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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** : Causes skin irritation.
- 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** : Adverse symptoms may include the following:
irritation
redness
- 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.
- Hazardous combustion 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised 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 spilt 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).

6.3 Methods and material 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 the 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 spilt 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 vapour or mist. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
2-(2-ethoxyethoxy)ethanol	DFG MAC-values list (Germany, 7/2022). PEAK: 100 mg/m ³ , 4 times per shift, 15 minutes. Form: inhalable fraction TWA: 50 mg/m ³ 8 hours. Form: inhalable fraction
2-(2-butoxyethoxy)ethanol	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor
morpholine	Safe Work Australia (Australia, 10/2022). Absorbed through skin. TWA: 71 mg/m ³ 8 hours. TWA: 20 ppm 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 vapour filter (Type A)
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.
Colour	: Black.
Odour	: Not available.
Odour threshold	: Estimated.: ≥ 0.1 ppm (morpholine).
pH	: 9.2 [OECD 122]
Melting point/freezing point	: Estimated.: ≤ -5 °C (morpholine).
Initial boiling point and boiling range	: Estimated.: ≥ 128 °C (morpholine).
Flash point	: >100 °C [ASTM D 93]
Evaporation rate	: Estimated.: ≤ 0.7 [butyl acetate = 1] (morpholine).
Flammability (solid, gas)	: Not applicable. (Liquid)
Upper/lower flammability or explosive limits	: Estimated.: ≥ 0.8 % (2-(2-butoxyethoxy)ethanol). Estimated.: ≤ 11 % (morpholine).
Vapour pressure	: Estimated.: ≤ 1 kPa (7 mm Hg) at 20°C [OECD 104] (morpholine).
Vapour density	: Estimated.: ≥ 3 [Air = 1] (morpholine).
Relative density	: 1.04 [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.
Oxidising properties	: Not applicable. Not classified.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

9.2 Other information

Volatility (w/w)	: 91 %.
VOC Volatility (w/w)	: 13 %.

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-ethoxyethoxy)ethanol	LCLo Inhalation Dusts and mists	Rat	>5.24 mg/l	4 hours
	LD50 Dermal	Rabbit	9143 mg/kg	-
	LD50 Oral	Rat	6429 mg/kg	-
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2764 mg/kg	-
	LCLo Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapour	Rat	8 mg/l	4 hours
morpholine	LD50 Dermal	Rabbit	500 mg/kg	-
	LD50 Oral	Rat	1900 mg/kg	-

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

Acute toxicity estimates

Route	ATE value
Oral	190000 mg/kg
Dermal	50000 mg/kg
Inhalation (vapours)	800 mg/l

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : Causes skin irritation.
- Eyes** : Causes serious eye irritation.
- Respiratory** : Not classified. No known significant effects or critical hazards.

Sensitisation

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)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

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-ethoxyethoxy)ethanol	Acute LC50 1982 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 6010000 µg/l Fresh water	Fish - Channel catfish - <i>Ictalurus punctatus</i>	96 hours
2-(2-butoxyethoxy)ethanol	Chronic EC10 7.38 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	7 days
	Acute EC50 >100 mg/l	Algae - <i>Desmodesmus subspicatus</i>	96 hours
morpholine	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
morpholine	Acute EC50 45 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 180 mg/l Fresh water	Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 5 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days

Conclusion/Summary : Not available.

12.2 Persistence and degradability

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

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-ethoxyethoxy)ethanol	-0.54	-	Low
2-(2-butoxyethoxy)ethanol	1	-	Low
morpholine	-2.55	<2.8	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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised 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

	ADR/RID	ADN	IMDG	IATA
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

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

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
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
	Calculation method 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.