

SAFETY DATA SHEET

Videojet®
Ink
V4210-D



Page	: 1 / 14
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : V4210-D
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

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Videojet Technologies U.K.,Ltd., 4 & 5 Ermine Centre Lancaster Way, Huntingdon, Cambs, PE29 6XX, United Kingdom
Tel: 0870 240 5542 Fax: 0870 242 2835

1.4 Emergency telephone number

Medical ☎ 3E: +44 8 08 189 0979
3E Code: 334466

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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) Flam. Liq. 2, H225 2) Eye Irrit. 2, H319 3) Repr. 1B, H360D 4) STOT SE 3, H336	Highly flammable liquid and vapour. Causes serious eye irritation. May damage the unborn child. May cause drowsiness or dizziness.
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Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 0%.

Ingredients of unknown ecotoxicity : ☑ Contains 24.4% of components with unknown hazards to the aquatic environment

2.2 Label elements



Danger. Highly flammable liquid and vapour. Causes serious eye irritation. May damage the unborn child. May cause drowsiness or dizziness. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF exposed or concerned: Get medical attention.

Hazardous ingredients : butanone (CAS 78-93-3, EC 201-159-0); C.I. Solvent Black 29 (CAS 117527-94-3, EC 938-781-3).

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.

Additional guidance : Avoid breathing vapour. Wear eye or face protection. IF INHALED: Call a POISON CENTER or physician if you feel unwell. If eye irritation persists: Get medical attention. Keep container tightly closed. Store in a well-ventilated place.

SECTION 3: Composition/information on ingredients

3.1 Substances : Not applicable.

3.2 Mixtures

Product/ingredient name	Identifiers	%	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
1) butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	55 - <65	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
2) C.I. Solvent Black 29	REACH #: 01-2120081123-67 EC: 938-781-3 CAS: 117527-94-3	5 - <10	Repr. 1B, H360D	[1] [2]
3) ethanol	REACH #: 01-2119457610-43 EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	1 - <3	Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1] [2]
4) [3-(2,3-epoxypropoxy)propyl] trimethoxysilane	REACH #: 01-2119513212-58 EC: 219-784-2 CAS: 2530-83-8	1 - <3	Eye Dam. 1, H318	[1]
5) propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	1 - <3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
6) ethyl acetate	REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5	1 - <3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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

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

Chemical name: Abbreviations and acronyms

Product/ingredient name	Chemical name
C.I. Solvent Black 29	reaction mass of: tert-alkyl(C12-C14)ammo-nium bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-); tert-alkyl(C12-C14)ammonium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphthalenolato(2-)]-chromate(1-); tert-alkyl(C12-C14)ammonium bis[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-chromate(1-); tert-alkyl(C12-C14)ammonium [[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-); tert-alkyl(C12-C14)ammonium [[1-[[5-(1,1-dimethylpropyl)-2-hydroxy-3-nitrophenyl]azo]-2-naphthalenolato(2-)]-[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphthalenolato(2-)]]-chromate(1-); tert-alkyl(C12-C14)ammonium ((1-(4(or 5)-nitro-2-oxidophenylazo)-2-naphtholato)(1-(3-nitro-2-oxido-5-pentylphenylazo)-2-naphtholato))chromate(1-)

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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 necessary, call a poison center or physician. 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** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain or irritation watering redness
- Inhalation** : Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced foetal weight

- increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

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 dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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 a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. 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.

7.3 Specific end use(s)

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).

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
1) butanone	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 899 mg/m ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 600 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.
2) C.I. Solvent Black 29	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 0.5 mg/m ³ , (as Cr) 8 hours.
3) ethanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 1000 ppm 8 hours. TWA: 1920 mg/m ³ 8 hours.
4) propan-2-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 1250 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
5) ethyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. STEL: 1468 mg/m ³ 15 minutes. TWA: 734 mg/m ³ 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
1) butanone	DNEL	Long term Oral	31 mg/kg bw/day	General population	Systemic
2)	DNEL	Long term Inhalation	106 mg/m ³	General population	Systemic
3)	DNEL	Long term Dermal	412 mg/kg bw/day	General population	Systemic
4)	DNEL	Long term Inhalation	600 mg/m ³	Workers	Systemic
5)	DNEL	Long term Dermal	1161 mg/kg bw/day	Workers	Systemic
6) C.I. Solvent Black 29	DNEL	Long term Inhalation	0.94 mg/m ³	Workers	Systemic
7)	DNEL	Long term Dermal	0.13 mg/kg	Workers	Systemic
8)	DNEL	Long term Inhalation	0.23 mg/m ³	General population	Systemic
9)	DNEL	Long term Dermal	0.07 mg/kg	[Consumers] General population	Systemic
10)	DNEL	Long term Oral	0.07 mg/kg	[Consumers] General population	Systemic
11) ethanol	DNEL	Long term Oral	87 mg/kg bw/day	General population	Systemic
12)	DNEL	Long term Inhalation	114 mg/m ³	General population	Systemic
13)	DNEL	Long term Dermal	206 mg/kg bw/day	General population	Systemic
14)	DNEL	Long term Dermal	343 mg/kg bw/day	Workers	Systemic
15)	DNEL	Short term Inhalation	950 mg/m ³	General population	Local
16)	DNEL	Long term Inhalation	950 mg/m ³	Workers	Systemic
17)	DNEL	Short term Inhalation	1900 mg/m ³	Workers	Local

18) [3-(2,3-epoxypropoxy)propyl] trimethoxysilane	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
19)	DNEL	Long term Dermal	12.5 mg/kg bw/day	General population	Systemic
20)	DNEL	Long term Dermal	21 mg/kg bw/day	Workers	Systemic
21)	DNEL	Long term Inhalation	147 mg/m ³	Workers	Systemic
22) propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
23)	DNEL	Long term Inhalation	89 mg/m ³	General population	Systemic
24)	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
25)	DNEL	Long term Inhalation	500 mg/m ³	Workers	Systemic
26)	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
27) ethyl acetate	DNEL	Long term Oral	4.5 mg/kg bw/day	General population	Systemic
28)	DNEL	Long term Dermal	37 mg/kg bw/day	General population	Systemic
29)	DNEL	Long term Dermal	63 mg/kg bw/day	Workers	Systemic
30)	DNEL	Long term Inhalation	367 mg/m ³	General population	Local
31)	DNEL	Long term Inhalation	367 mg/m ³	General population	Systemic
32)	DNEL	Short term Inhalation	734 mg/m ³	General population	Local
33)	DNEL	Short term Inhalation	734 mg/m ³	General population	Systemic
34)	DNEL	Long term Inhalation	734 mg/m ³	Workers	Local
35)	DNEL	Long term Inhalation	734 mg/m ³	Workers	Systemic
36)	DNEL	Short term Inhalation	1468 mg/m ³	Workers	Local
37)	DNEL	Short term Inhalation	1468 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
1) butanone	Fresh water	55.8 mg/l	Sensitivity Distribution
2) ethanol	Fresh water	0.96 mg/l	Assessment Factors
3) [3-(2,3-epoxypropoxy)propyl] trimethoxysilane	Fresh water	1 mg/l	Assessment Factors
4) propan-2-ol	Fresh water	140.9 mg/l	Sensitivity Distribution
5) ethyl acetate	Fresh water	0.24 mg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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 B, EN374 A, EN374 I
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 (EN14387): 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** : Highest known value: 100 ppm. Weighted average: 13 ppm.
- pH** : Not applicable.
- Melting point/freezing point** : May start to solidify at the following temperature: -83 °C. Weighted average: -87 °C.
- Initial boiling point and boiling range** : 77 °C.
- Flash point** : -6 °C.
- Evaporation rate** : Highest known value: 7.1. Weighted average: 6.7.
- Flammability (solid, gas)** : Not applicable. (Liquid)
- Upper/lower flammability or explosive limits** : Lowest known value: .4%. Highest known value: 19.0%.
- Vapour pressure** : Highest known value: 81 mm Hg at 20°C. Weighted average: 75 mm Hg at 20°C.
- Vapour density** : >1.6 (Air = 1)
- Relative density** : 0.9
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Lowest known value: 250 °C. Weighted average: 389 °C.
- Decomposition temperature** : Thermally stable.
- Viscosity** : Not available.
- Explosive properties** : Not applicable. Not classified.
- Oxidising properties** : Not applicable. Not classified.

9.2 Other information

- Volatility (w/w)** : 65 %.
- VOC Volatility (w/w)** : 65 %.

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

Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Reactive or incompatible with the following materials:
oxidising materials

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
Butanone	LC50 Inhalation Vapour	Rat	23.5 mg/l	8 hours
	LD50 Dermal	Rabbit - Male	>8000 mg/kg	-
	LD50 Oral	Rat	3460 mg/kg	-
C.I. Solvent Black 29	LDLo Dermal	Rat	>2000 mg/kg	-
	LDLo Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapour	Rat	>117 mg/l	4 hours
ethanol	LD50 Dermal	Rabbit	>15800 mg/kg	-
	LD50 Oral	Rat	10470 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.3 mg/l	4 hours
propan-2-ol	LD50 Dermal	Rabbit	4250 mg/kg	-
	LD50 Oral	Rat	8025 mg/kg	-
	LCLo Inhalation Vapour	Rat	>24.6 mg/l	6 hours
ethyl acetate	LD50 Dermal	Rabbit	12.9 g/kg	-
	LD50 Oral	Rat	5.84 g/kg	-
	LCLo Inhalation Vapour	Rat	>22.5 mg/l	6 hours
	LD50 Dermal	Rabbit	>20000 mg/kg	-
	LD50 Oral	Rat	5620 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Skin - Primary dermal irritation index (PDII)	Rabbit	0	4 hours	14 days
	Eyes - Irritant	Rabbit	-	-	21 days

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.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
butanone C.I. Solvent Black 29 ethanol	skin	Guinea pig	Not sensitizing
	skin	Guinea pig	Not sensitizing
	skin	Mouse	Not sensitizing
	Respiratory	Rat	Not sensitizing

Conclusion/Summary

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

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

Mutagenicity

Product/ingredient name	Test	Experiment	Result
ethanol	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo Subject: Mammalian-Animal	Negative

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

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
C.I. Solvent Black 29	Positive	Negative	Equivocal	Rat	Oral: 500 mg/kg	-

Conclusion/Summary : May damage the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
butanone propan-2-ol ethyl acetate	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
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

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	Sub-chronic NOAEL Oral	Rat	1730 mg/kg	90 days

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

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
butanone	Acute EC50 2029 mg/l Fresh water	Algae - Pseudokirchnerella subcapitata	96 hours
	Acute EC50 308 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2993 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1240 mg/l Fresh water	Algae - Pseudokirchnerella subcapitata	96 hours
C.I. Solvent Black 29	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	24 hours
ethanol	Acute LC50 >100 mg/l Fresh water	Fish - Danio rerio	96 hours
	Acute EC50 275 mg/l Fresh water	Algae - Chlorella vulgaris	72 hours
	Acute LC50 5012 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
	Acute LC50 11200 mg/l Fresh water	Fish - oncorhynchus mykiss	24 hours
	Chronic EC10 11.5 mg/l Fresh water	Algae - Chlorella vulgaris	72 hours

propan-2-ol	Chronic NOEC 79 mg/l Marine water	Crustaceans - Palaemonetes pugio	12 days
	Chronic NOEC 9.6 mg/l Chronic NOEC 250 mg/l Fresh water Acute EC50 >1800 mg/l Fresh water	Daphnia - daphnia magna Fish - Danio rerio - Embryo Algae - Scenedesmus quadricauda	10 days 120 hours 7 days
ethyl acetate	Acute LC50 9640000 µg/l Fresh water Chronic LOAEL 1800 mg/l Fresh water	Fish - Pimephales promelas Algae - Scenedesmus quadricauda	96 hours 7 days
	Acute EC50 2500000 µg/l Fresh water Acute LC50 154000 µg/l Fresh water Acute LC50 230000 µg/l Fresh water Chronic NOEC >100 mg/l Fresh water	Algae - Selenastrum sp. Daphnia - Daphnia cucullata Fish - Pimephales promelas Algae - Desmodesmus subspicatus	96 hours 48 hours 96 hours 72 hours
	Chronic NOEC 2400 µg/l Fresh water Chronic NOEC 75.6 mg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Embryo	21 days 32 days

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
butanone	-	-	Readily
C.I. Solvent Black 29	-	-	Not readily
ethanol	-	-	Readily
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	-	-	Not readily
propan-2-ol	-	-	Readily
ethyl acetate	-	-	Readily

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butanone	0.3	-	low
ethanol	-0.35	-	low
propan-2-ol	0.05	-	low
ethyl acetate	0.68	30	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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.





Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

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	UN1210	UN1210	UN1210	UN1210
14.2 UN proper shipping name	Printing Ink	Printing Ink	Printing Ink	Printing Ink
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	Special provisions 640 (C) Tunnel code (D/E)	Special provisions 640 (C)	-	-

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Restricted to professional users.

Other EU regulations

EU Regulation (EC) No. 98/2013 (Explosives Precursors) : Not applicable.

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

15.3 Other information

3215.11 Printing ink: Black.

USA ...90.60


EU ...10

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


Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

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

Classification	Justification
 Flam. Liq. 2, H225 Eye Irrit. 2, H319 Repr. 1B, H360D STOT SE 3, H336	On basis of test data Calculation method Calculation method Calculation method

Full text of abbreviated H statements

 H225 H318 H319 H360D H336 EUH066	Highly flammable liquid and vapour. Causes serious eye damage. Causes serious eye irritation. May damage the unborn child. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.
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Full text of classifications [CLP/GHS]

 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 2 Repr. 1B STOT SE 3	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 REPRODUCTIVE TOXICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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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.

Exposure Scenarios

<http://www.videojet.com/usa/materialsafetydatasheets>

