Safety Data Sheet
Videojet®
Ink
16-5900Q

Page	:	1 / 11
Version	:	GHS (US) ENGLISH
Version number	:	1.06
Date of issue/ Date of revision	:	5/8/2012.
Date of previous issue	:	3/9/2012. (1.05)

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

1.1 Product identifier

Product name : 16-5900Q

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
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

Nam Trinh J.S. Co., 37 No. 1 Cu Xa Do Thanh, Ward 4, District 3, Ho Chi Minh City, Vietnam
Tel: +84 8 3848 7613 Fax: +84 8 3848 7612

1.4 Emergency telephone number

Emergency telephone number : Medical: CALL RMPDC, USA (303) 623-5716
Transporters: CALL CHEMTREC, USA (800)-424-9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification

Flam. Liq. 2, H225	Highly flammable liquid and vapor.
Acute Tox. 4, H302	Harmful if swallowed.
Acute Tox. 4, H312	Harmful in contact with skin.
Acute Tox. 3, H331	Toxic if inhaled.
Skin Irrit. 2, H315	Causes skin irritation.
Eye Dam. 1, H318	Causes serious eye damage.
Muta. 2, H341	Suspected of causing genetic defects.
STOT SE 1, H370	Causes damage to organs.
STOT SE 3, H336	May cause drowsiness and dizziness.
Aquatic Acute 1, H400	Very toxic to aquatic life.

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 19.6%

Ingredients of unknown ecotoxicity : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 22.6%

2.2 Label elements

GHS label elements

Danger. Highly flammable liquid and vapor. Toxic if inhaled. Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye damage. Suspected of causing genetic defects. Causes damage to organs. May cause drowsiness and dizziness. Very toxic to aquatic life. Use personal protective equipment as required. Do not breathe vapor. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

Hazardous ingredients : butanone (CAS 78-93-3, EC 201-159-0)
methanol (CAS 67-56-1, EC 200-659-6)
butan-1-ol (CAS 71-36-3, EC 200-751-6)
phenol (CAS 108-95-2, EC 203-632-7)

ANSI Z129.1-2006 Label elements

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 fatal or cause blindness 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.

2.3 Other hazards

Other hazards which do not result in classification : Repeated exposure may cause skin dryness or cracking.

Additional guidance : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. IF exposed: Call a POISON CENTER or physician. Keep container tightly closed. Store in a well-ventilated place.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	CAS #	%	GHS Classification
1) butanone	78-93-3	35 - <45	FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3
2) methanol	67-56-1	15 - <25	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY: ORAL - Category 3 ACUTE TOXICITY: SKIN - Category 3 ACUTE TOXICITY: INHALATION - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
3) butan-1-ol	71-36-3	5 - <10	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY: ORAL - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3
4) C.I. Solvent Black 29	117527-94-3	2 - <5	ACUTE TOXICITY: SKIN - Category 5
5) ethanol	64-17-5	1 - <3	FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
6) phenol	108-95-2	1 - <3	ACUTE TOXICITY: ORAL - Category 3 ACUTE TOXICITY: SKIN - Category 3 ACUTE TOXICITY: INHALATION - Category 1 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 GERM CELL MUTAGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [central nervous system (CNS), kidneys, liver and skin] - Category 2 AQUATIC TOXICITY (ACUTE) - Category 1

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. 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. 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 : Get medical attention immediately. Call a poison center or physician. Wash skin thoroughly with soap and water or use recognized skin cleanser. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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 damage.

Inhalation : Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

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, CO_2, 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 vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. 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
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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor 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 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. Collect spillage.

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. Use spark-proof tools and explosion-proof equipment. 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). Use spark-proof tools and explosion-proof equipment. 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). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Avoid release to the environment. 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. Take precautionary measures against electrostatic discharges. 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

Do not store below the following temperature: 2°C (35.6°F). 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
1) butanone	**OSHA PEL 1989 (United States, 3/1989).** TWA: 200 ppm 8 hour(s). TWA: 590 mg/m³ 8 hour(s). STEL: 300 ppm 15 minute(s). STEL: 885 mg/m³ 15 minute(s). **OSHA PEL (United States, 6/2010).** TWA: 200 ppm 8 hour(s). TWA: 590 mg/m³ 8 hour(s).
2) methanol	**OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** TWA: 200 ppm 8 hour(s). TWA: 260 mg/m³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 325 mg/m³ 15 minute(s). **OSHA PEL (United States, 6/2010).** TWA: 200 ppm 8 hour(s). TWA: 260 mg/m³ 8 hour(s).
3) butan-1-ol	**OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** CEIL: 50 ppm CEIL: 150 mg/m³ **OSHA PEL (United States, 6/2010).** TWA: 100 ppm 8 hour(s). TWA: 300 mg/m³ 8 hour(s).
4) C.I. Solvent Black 29	**OSHA PEL 1989 (United States, 3/1989).** TWA: 0.5 mg/m³, (as Cr) 8 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 0.5 mg/m³, (as Cr) 8 hour(s).
5) ethanol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).
6) phenol	**OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** TWA: 5 ppm 8 hour(s). TWA: 19 mg/m³ 8 hour(s). **OSHA PEL (United States, 6/2010). Absorbed through skin.** TWA: 5 ppm 8 hour(s). TWA: 19 mg/m³ 8 hour(s).

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

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. 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.

Hand protection : 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.

Respiratory protection : 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.

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	:	Highest known value: 100 ppm. Weighted average: 100 ppm.
pH	:	Not applicable.
Melting point/freezing point	:	May start to solidify at the following temperature: -86 °C. Weighted average: -90 °C.
Initial boiling point and boiling range	:	Lowest known value: 65 °C. Weighted average: 82 °C.
Flash point	:	-3 °C.
Evaporation rate (butyl acetate = 1)	:	Highest known value: 7.1. Weighted average: 4.8.
Flammability (solid, gas)	:	Not applicable. (Liquid)
Upper/lower flammability or explosive limits	:	Lowest known value: 1.4%. Highest known value: 44.0%.
Vapor pressure	:	Highest known value: 92 mm Hg at 20°C. Weighted average: 72 mm Hg at 20°C.
Vapor density	:	>1.1 (Air = 1)
Relative density (Water = 1)	:	0.9
Solubility(ies)	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Lowest known value: 250 °C. Weighted average: 471 °C.
Decomposition temperature	:	Thermally stable.
Viscosity	:	Not available.
Explosive properties	:	Not applicable. Not classified.
Oxidizing properties	:	Not applicable. Not classified.

9.2 Other information

Volatility (w/w)	:	75 %.
VOC Volatility (w/w)	:	75 %.

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

None.

10.5 Incompatible materials

None.

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
ethanol	LC50 Inhalation Gas.	Rat	20000 ppm	10 hours
	LD50 Oral	Rabbit	6300 mg/kg	-
	LD50 Oral	Rat	7060 mg/kg	-
butan-1-ol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
phenol	LC50 Inhalation Vapor	Rat	316 mg/m3	4 hours
	LD50 Dermal	Rabbit	630 mg/kg	-
	LD50 Oral	Rat	317 mg/kg	-
C.I. Solvent Black 29	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
butanone	LC50 Inhalation Vapor	Rat	23500 mg/m3	8 hours
	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-

Conclusion/Summary : Toxic if inhaled. Harmful if swallowed. Harmful in contact with skin.

Irritation/Corrosion

Conclusion/Summary

Skin : Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Eyes : Causes serious eye damage.

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 : Suspected of causing genetic defects.

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
butanone	Category 3	Not determined	Narcotic effects
methanol	Category 1	Not determined	Not determined
butan-1-ol	Category 3	Not determined	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
phenol	Category 2	Not determined	central nervous system (CNS), kidneys, liver and skin

Aspiration hazard

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

Potential chronic health effects, Other

Conclusion/Summary : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute LC50 3715000 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 5680 mg/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 11000000 ug/L Marine water	Fish - Alburnus alburnus - 8 to 10 cm	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae - 3 days	12 weeks
butan-1-ol	Acute EC50 1983000 ug/L Fresh water	Daphnia - Daphnia magna - 6 to 24 hours	48 hours
	Acute LC50 100 mg/L Fresh water	Fish - Lepomis macrochirus - 0.1 g	96 hours
phenol	Acute EC50 61.1 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata - 4 to 7 days	96 hours
	Acute EC50 36 mg/L Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute EC50 94 mg/L Fresh water	Aquatic plants - Lemna aequinoctiales	96 hours
	Acute EC50 4200 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1500000 ug/L Fresh water	Aquatic plants - Lemna minor	72 hours
	Acute LC50 800 ug/L Marine water	Crustaceans - Archaeomysis kokuboi - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 1.75 ug/L Fresh water	Fish - Cyprinus carpio - Larvae - 8 mm	96 hours
	Chronic NOEC 118 ug/L Fresh water	Fish - Oncorhynchus mykiss	90 days
methanol	Acute EC50 16.912 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 290 mg/L Fresh water	Fish - Danio rerio - Egg - stage	96 hours
butanone	Acute EC50 >500000 ug/L Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 ug/L Fresh water	Daphnia - Daphnia magna - Larvae - <24 hours	48 hours
	Acute LC50 3220000 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 22 mm - 0.167 g	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Not available.				

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Not available.			

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Not available.			

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. 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.

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	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	Yes.	Yes.	Yes.	Yes.
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.
Additional information	-	-	-	-

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

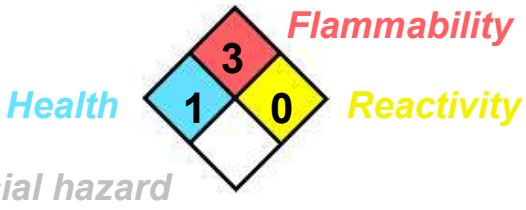
SECTION 15: Regulatory information

CERCLA: Hazardous substances. : The following components are listed: butanone (35 - <45%); methanol (15 - <25%); butan-1-ol (5 - <10%); 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-naphthaleno-lato(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-naphthaleno-lato(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-naphthaleno-lato(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-) (2 - <5%); phenol (1 - <3%)

SARA 313 : The following components are listed: methanol (15 - <25%); butan-1-ol (5 - <10%); 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-naphthaleno-lato(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-naphthaleno-lato(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-naphthaleno-lato(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-) (2 - <5%); phenol (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: ethanol (1 - <3%); Formaldehyde (<0.1%).

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



Tariff Code - harmonized system : 3215.11 Printing ink: Black.
USA ...00.60
EU ...00.90

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

International regulations

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

Indicates information that has changed from previously issued version.

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.