A CANON COMPANY

SAFETY DATA SHEET

1. Identification

Product identifier **Ink Tank Cyan TCS500**

Other means of identification

Article Number 29953719,29953723,1060019426

Product code 7518B001AA,7518B005AA,7518B011AA

Recommended use Inkjet printing ink.

Recommended restrictions Other uses not recommended.

Manufacturer/Importer/Supplier/Distributor information

Supplier Canon U.S.A., Inc.

Address One Canon Park

City Melville, NY 11747

Country United States

Telephone Number 1-800-OK-CANON

E-mail Address sds-hq@oce.com

Emergency Telephone Numbers

CHEMTREC +1 (800) 424-9300 (24-hour safety information)

NCEC Service +1 (866) 928-0789 For chemical emergencies only.

Other means of identification None.

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Reproductive toxicity Category 1B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May damage fertility or the unborn child.

Precautionary statement

Prevention Wear protective gloves.

Response If exposed or concerned: Get medical advice/attention.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
water		7732-18-5	60 - < 90
2-pyrrolidone		616-45-5	5 - <10
1,2-Hexanediol		6920-22-5	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
2,2', 2''-Nitrilotriethanol		102-71-6	< 1

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. ACGIH Threshold Limit Values

Components	Type	Value
2,2', 2''-Nitrilotriethanol (CAS 102-71-6)	TWA	5 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate ventilation. See operator manual or safety data sheet of the printer.

Individual protection measures, such as personal protective equipment

Eye/face protection Not required during normal intended use of this product.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Glove material: Nitrile.. Use gloves with breakthrough time of 0.1 mm minutes. Minimum glove thickness 30 mm.

Other Not required during normal intended use of this product.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Not required during normal intended use of this product.

Thermal hazards Not normally needed.

General hygiene considerations Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Blue

Odor Very faint.

Odor threshold Not available.

pH 7 - 8.5

Melting point/freezing point 32 °F (0 °C)

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 1.8 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 1.12 g/cm3 estimated

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Not classified.
Eye contact	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
1,2-Hexanediol (CAS 6920-22-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, Days
Oral		
LD50	Rat	> 5000 mg/kg
2,2', 2''-Nitrilotriethanol (CAS 102-71-6)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg bw/day
Inhalation		
LC50	Rat	1.8 mg/m3, 4 hours
Oral		
LD50	Rat	8000 mg/kg bw/day
2-pyrrolidone (CAS 616-45-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg bw/day OECD 402
Inhalation		
LC0	Rat	0.061 mg/l, 4 hours OECD 403
Oral		
LD50	Rat	> 8000 mg/kg bw/day OECD 401

Skin corrosion/irritation Health injuries are not known or expected under normal use. Knowledge about health hazard is incomplete.

Irritation Corrosion - Skin

Ink Tank Cyan TCS500	Result: Non-Irritating
1,2-Hexanediol	OECD 404 Result: Not irritating

Irritation Corrosion - Skin

2-pyrrolidone	OECD 404 Result: Not irritating
2,2', 2''-Nitrilotriethanol	Result: Not irritating

Serious eye damage/eye irritation Health injuries are not known or expected under normal use. Not classified.

Eye

Ink Tank Cyan TCS500	OECD405 Result: Not classified.
1,2-Hexanediol	OECD 405 Result: Irritating
2-pyrrolidone	OECD 405 Result: Irritating
2,2', 2''-Nitrilotriethanol	Result: Not irritating

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer. Knowledge about health hazard is incomplete.

Skin sensitization This product is not expected to cause skin sensitization.

Sensitization

Ink Tank Cyan TCS500	Result: Not sensitising

Skin sensitization

2,2', 2''-Nitrilotriethanol	OECD 406, GMPT Result: Not sensitizing
1,2-Hexanediol	OECD 429, LLNA Result: Negative
2-pyrrolidone	OECD 429, Read across Result: Not sensitizing

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity: Ames test

1,2-Hexanediol	OECD 471 Result: Negative
2,2', 2''-Nitrilotriethanol	OECD 471 Result: Negative
2-pyrrolidone	OECD 471 Result: Negative

Germ cell mutagenicity: Chromosome abberation

1,2-Hexanediol	OECD 473 Result: Negative
2,2', 2''-Nitrilotriethanol	OECD 473 Result: Negative
2-pyrrolidone	OECD 473 Result: Negative

Germ cell mutagenicity: Micronucleus

2-pyrrolidone	OECD 474 Result: Negative
2,2', 2''-Nitrilotriethanol	OECD 487 Result: Negative

Mutagenicity

Ink Tank Cyan TCS500	Result: Negative.
1,2-Hexanediol	OECD 476 Result: Negative
2,2', 2''-Nitrilotriethanol	OECD 486, In vivo Result: Negative

Carcinogenicity No data available to indicate product or any components present at greater than 0.1% are carcinogenic. Knowledge about carcinogenicity is incomplete.

2,2', 2''-Nitrilotriethanol	Result: Not carcinogenic Species: Rat Test Duration: 2 years

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Developmental effects

2-pyrrolidone	250 mg/kg bw/day OECD 414 Result: NOAEL Species: Rabbit
1,2-Hexanediol	300 mg/kg bw/day OECD 414 Result: NOAEL
2-pyrrolidone	600 mg/kg bw/day OECD 414 Result: NOAEL Species: Rat
2,2', 2''-Nitrilotriethanol	OECD 421 Result: Negative

Fertility effects - Males and females

2,2', 2''-Nitrilotriethanol	Result: Negative

Reproductivity

1,2-Hexanediol	1000 mg/kg bw/day Test Duration: 90 day

Specific target organ toxicity - single exposure Knowledge about health hazard is incomplete.

Specific target organ toxicity - repeated exposure Not classified.

2,2', 2''-Nitrilotriethanol	1000 mg/kg bw/day, Oral Result: NOAEL Species: Rat Test Duration: 90 days 125 mg/kg bw/day, Dermal Result: NOAEL Species: Rat Organ: Kidney Test Duration: 90 days
2-pyrrolidone	207 mg/kg bw/day OECD 408 Result: NOAEL Organ: Kidney
1,2-Hexanediol	500 mg/kg bw/day OECD 414, Oral Result: NOAEL 700 mg/kg bw/day OECD 411 Result: NOAEL Test Duration: 90 day
2,2', 2''-Nitrilotriethanol	763 ppm, Inhalation Result: LOAEL Species: Rat Test Duration: 14 days

Aspiration hazard Not an aspiration hazard. Knowledge about health hazard is incomplete.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
1,2-Hexanediol (CAS 6920-22-5)			
	LC50		> 100 mg/l, 72 hours Read across
Aquatic			
Crustacea	LC50	Daphnia	> 1000 mg/l, 48 hours
Fish	LC50	Fish	> 1000 mg/l, 96 Hours Read across
2,2', 2''-Nitrilotriethanol (CAS 102-71-6)			
Aquatic			
Acute			
Algae	EC50	Algae	169 mg/l, 96 hours

Components		Species	Test Results
Crustacea	LC50	Daphnia	610 mg/l, 48 hours
Fish	LC50	Fish	11800 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Daphnia	> 100 mg/l, 21 days

2-pyrrolidone (CAS 616-45-5)

Aquatic			
Acute			
Algae	EC50	Algae	> 500 mg/l, 72 hours
Crustacea	LC50	Daphnia	> 500 mg/l, 48 hours
Fish	LC50	Fish	4600 mg/l, 96 hours

Persistence and degradability

Biodegradability

Percent degradation (Aerobic biodegradation)

1,2-Hexanediol	OECD 301B Result: Readily biodegradable
2-pyrrolidone	OECD 302 Result: Readily biodegradable

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2,2', 2''-Nitrilotriethanol	-1.9
2-pyrrolidone	-0.71

Bioconcentration factor (BCF)

1,2-Hexanediol	Result: Not expected
2,2', 2''-Nitrilotriethanol	< 3.9
2-pyrrolidone	3.16

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes
Classified hazard categories	Reproductive toxicity

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

16. Other information, including date of preparation or last revision

Issue date	07-12-2019
Revision date	07-12-2019
Version #	1.0
Disclaimer	The information in this Safety Data Sheet is based on the present state of knowledge and current legislation and is believed to be accurate. It provides guidance on health, safety and environmental aspects of the product and should neither be construed as any guarantee of specific properties nor of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1. This document was prepared to the requirements of the jurisdiction in Section 1 and may not meet regulatory requirements in other countries or territories. The information contained in this safety data sheet does not replace the user's own assessment of workplace risks, as required by applicable health and safety legislation.