SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2025
Date Updated: January 06, 2025

SECTION 1. - - - - - - - - - PRODUCT AND COMPANY IDENTIFICATION- - - - - - - - - -

Product Name	CTAC
Product Code(s)	CB0332
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Inc.
Address	20 Konrad Crescent, Markham, Ontario, Canada, L3R 8T4
Telephone	(905) 474 4493
Fax	(905) 474 5794
For Chemical Emergency Phone#	(416) 995 9730

SECTION 2. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

GHS Classification

Acute toxicity, Dermal (Category 3),H311
Acute toxicity, Oral (Category 4), H302
Skin corrosion/irritation (Category 1C),H318
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H302	Harmful if swallowed.
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260		Do not breathe dust.
P264		Wash skin thoroughly after handling
P270		Do not eat, drink or smoke when using this product
P273		Avoid release to the environment.
P280		Wear protective gloves/ protective clothing/ eye protection/ face protection
P301	+P312+P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301	+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303	+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304	+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305	+P351+P338+	IF IN EYES: Rinse cautiously with water for several minutes. Remove

		contact lenses, if present and easy to do. Continue rinsing.
P310		Immediately call a POISON CENTER/ doctor.
P361	+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391		Collect spillage.
P405		Store locked up.
P501		Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

Chemical Name	EC No.	CAS-No	Weight %
Cetrimonium chloride	203-928-6	112-02-7	<100

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas. Combustible. Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.
hygroscopic Keep in a dry place.

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific engineering controls
Use mechanical exhaust or laboratory fume hood to avoid exposure.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

Appearance

Form	powder
Color	white

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: 232 - 237 °C (450 - 459 °F)
Boiling point	235 - 248 °C 455 - 478 °F at 1,013 hPa - OECD Test Guideline 103
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor pressure	< 0.01 hPa at 20 °C (68 °F) - OECD Test Guideline 104
Density	0.96 g/cm3 at 20 °C (68 °F)
Water solubility	0.24 g/l at 25 °C (77 °F)
Partition coefficient: n-octanol/water	log Pow: 3.08 at 25 °C (77 °F) - (calculated) - Bioaccumulation is not expected.
Relative vapor density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation rate	no data available

Other safety information

Surface tension	33 mN/m at 1g/l - OECD Test Guideline 115

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

Reactivity
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
No data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
In the event of fire: see section 5

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

Acute toxicity
LD50 Oral - Rat - male and female - 699 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available

Acute toxicity estimate Dermal - 528 mg/kg (Expert judgment)
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Corrosive
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Causes serious eye damage.
Eyes - Rabbit
Result: Corrosive (OECD Test Guideline 405)

Respiratory or skin sensitization
Buehler Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mutagenicity (mammal cell test):
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476 Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Teratogenicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Additional Information
RTECS: ML9145000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

Toxicity
Toxicity to fish
static test LC50 - Danio rerio (zebra fish) - 0.19 - 0.29 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 0.280 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae
static test NOEC - Pseudokirchneriella subcapitata (green algae) - 0.04 mg/l - 72 h
(OECD Test Guideline 201) Remarks: (in analogy to similar products)

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 0.08 mg/l - 72 h
(OECD Test Guideline 201) Remarks: (in analogy to similar products)

Toxicity to bacteria
static test EC50 - Pseudomonas putida - 0.96 mg/l - 16 h (DIN 38 412 Part 8)

Persistence and degradability
No data available

Bioaccumulative potential
Bioaccumulation Lepomis macrochirus (Bluegill sunfish) - 56 d
(Hexadecyltrimethylammonium chloride)
Bioconcentration factor (BCF): 79
Elimination: yes
(US-EPA)

Mobility in soil
No data available

PBT and vPvB assessment
No data available

Other adverse effects
No data available

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

TDG

UN number: 2923 **Class:** 8 (6.1) **Packing group:** III

Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (Hexadecyltrimethylammonium chloride)

Subsidiary risk : 6.1

Labels: 8

(6.1) ERG Code: 154

Marine pollutant: no

IMDG

UN number: 2923 **Class:** 8 (6.1) **Packing group:** III **EMS-No:** F-A, S-B

Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (Hexadecyltrimethylammonium chloride)

Marine pollutant : yes

IATA

UN number: 2923 **Class:** 8 (6.1) **Packing group:** III

Proper shipping name: Corrosive solid, toxic, n.o.s. (Hexadecyltrimethylammonium chloride)

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - - -

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS