

SAFETY DATA SHEET

SPECTRUS CT1300

1. Identification

Product identifier SPECTRUS CT1300
Other means of identification None.
Recommended use of the chemical and restrictions on use
Recommended use Water-based microbial control agent.
Recommended restrictions None known.

Company/undertaking identification

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2. Hazards identification

Physical hazards	Flammable liquids	Category 3
	Corrosive to metals	Category 1
Health hazards	Acute toxicity (oral)	Category 4
	Acute toxicity (dermal)	Category 4
	Skin corrosion or irritation	Category 1
	Serious eye damage or eye irritation	Category 1
	Skin sensitization	Category 1
	Germ cell mutagenicity	Category 2
	Specific target organ toxicity - single exposure	Category 2
	Specific target organ toxicity - repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment - acute hazard	Category 1
	Hazardous to the aquatic environment - chronic hazard	Category 1

Label elements



Signal word

Danger

Hazard statement

Flammable liquid and vapor. May be corrosive to metals. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing genetic defects. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

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Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Keep only in original packaging. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Absorb spillage to prevent material-damage. Collect spillage.

Storage

Store in a well-ventilated place. Keep cool. Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification

None known.

Supplemental information

50% of the mixture consists of component(s) of unknown acute inhalation toxicity. 50% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Hazardous components

Chemical name	Common name and synonyms	CAS number	%
Alkyl dimethyl benzyl ammonium chloride		68424-85-1	50 - < 60

Non-hazardous components

Chemical name	Common name and synonyms	CAS number	%
Ethanol		64-17-5	10 - < 20

4. First-aid measures

Inhalation

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

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. 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. Wash contaminated clothing before reuse.

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5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant 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	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. 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	In case of fire and/or explosion do not breathe fumes. 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	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. 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	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. 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. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

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8. Exposure controls/personal protection

Occupational exposure limits

India. OELs. The Factories Act, The Second Schedule: Permissible Levels of Certain Chemical Substances in the Work Environment

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

Biological limit values

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

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Liquid

Physical state

Liquid.

Form

Liquid.

Color

Colorless to yellow

Odor

Mild

Odor threshold

Not available.

pH (concentrated product)

7.5 Neat

pH in aqueous solution

6.3 (10% Solution)

Melting point/freezing point

-22 °C

Initial boiling point and boiling range

Not available.

Flash point

54 °C P-M(CC)

Evaporation rate

Slower than Ether

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

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Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	44 mmHg
Vapor pressure temp.	21 °C
Vapor density	< 1
Relative density	0.96
Relative density temperature	21 °C
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	73 mPa.s
Viscosity temperature	21 °C
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Pour point	-19 °C
Specific gravity	0.965

10. Stability and reactivity

Reactivity	May be corrosive to metals.
Chemical stability	Not available.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Metals.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs by inhalation. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Harmful in contact with skin. Harmful if swallowed.
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Product	Species	Test Results
SPECTRUS CT1300 (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)

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Product	Species	Test Results
Oral LD50	Rat	688 mg/kg, (Calculated according to GHS additivity formula)

Components	Species	Test Results
Alkyl dimethyl benzyl ammonium chloride (CAS 68424-85-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3340 mg/kg
<i>Oral</i>		
LD50	Rat	344 mg/kg
Ethanol (CAS 64-17-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	124.7 mg/l/4h
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

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

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

Carcinogenicity Not available.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product	Species	Test Results
SPECTRUS CT1300 (CAS Mixture)		
LC10	Annelida(Lumbriculus variegatus)	0.37 mg/L, Acute Toxicity, 96 hour
LC50	Annelida(Lumbriculus variegatus)	1.47 mg/L, Acute Toxicity, 96 hour
	Benthic Crustacean(Gammarus pseudolimnaeus)	0.07 mg/L, Acute Toxicity, 96 hour
	Channel Catfish	0.86 mg/L, Acute Toxicity, 96 hour
	Freshwater Snail(Physa sp.)	0.46 mg/L, Acute Toxicity, 96 hour
	Midge larvae (Chironomus tentans)	0.5 mg/L, Acute Toxicity, 96 hour
NOEL	Channel Catfish	0.54 mg/L, Acute Toxicity, 96 hour
	Freshwater Snail(Physa sp.)	0.36 mg/L, Acute Toxicity, 96 hour

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Product		Species	Test Results	
Aquatic Crustacea	IC25	Midge larvae (Chironomus tentans)	0.13 mg/L, Acute Toxicity, 96 hour	
		Ceriodaphnia	0.098 mg/L, Chronic Bioassay, 7 day	
		LC50	Ceriodaphnia	0.35 mg/L, Static Renewal Bioassay, 48 hour
		Daphnia magna	0.11 mg/L, Static Acute Bioassay, 48 hour	
		0.04 mg/L, Flow-Thru Bioassay, 48 hour		
		Daphnia pulex	0.05 mg/L, Static Renewal Bioassay, 48 hour	
		NOEL	Mysid Shrimp	0.16 mg/L, Flow-Thru Bioassay, 96 hour
		Ceriodaphnia	0.15 mg/L, Static Renewal Bioassay, 48 hour	
		Daphnia magna	0.06 mg/L, Static Acute Bioassay, 48 hour	
		0.026 mg/L, Flow-Thru Bioassay, 48 hour		
	Daphnia pulex	0.031 mg/L, Static Renewal Bioassay, 48 hour		
	Fish	IC25	Mysid Shrimp	0.03 mg/L, Flow-Thru Bioassay, 96 hour
			Fathead Minnow	0.259 mg/L, Chronic Bioassay, 7 day
		LC50	Fathead Minnow	0.72 mg/L, Flow-Thru Bioassay, 96 hour
			Menidia beryllina (Silversides)	0.62 mg/L, Flow-Thru Bioassay, 96 hour
Rainbow Trout			2 mg/L, Flow-Thru Bioassay, 96 hour	
NOEL	Sheepshead Minnow	1.76 mg/L, Flow-Thru Bioassay, 96 hour		
	Fathead Minnow	0.41 mg/L, Flow-Thru Bioassay, 96 hour		
	Menidia beryllina (Silversides)	0.35 mg/L, Flow-Thru Bioassay, 96 hour		
	Rainbow Trout	1.2 mg/L, Flow-Thru Bioassay, 96 hour		
	Sheepshead Minnow	1 mg/L, Flow-Thru Bioassay, 96 hour		
Components		Species	Test Results	
Alkyl dimethyl benzyl ammonium chloride (CAS 68424-85-1)				
	EC50	Active Sludge	10 mg/l	
		Daphnia Magna	0.016 mg/l, 48 hour	
Aquatic				
Fish	LC50	Rainbow Trout	0.93 mg/l, 96 hour	
Bioaccumulative potential				
Partition coefficient n-octanol / water (log Kow)				
Ethanol		-0.31		
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.		
Environmental fate		Very toxic to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.		
Persistence and degradability				
		66% CO2 Evolution (Modified Sturm Test) (OECD 301B) Testing has shown product not to be readily biodegradable.		
- COD (mgO2/g)		1470		
- BOD 5 (mgO2/g)		43		

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- BOD 28 (mgO2/g)	156
- Closed Bottle Test (% Degradation in 28 days)	14
- Zahn-Wellens Test (% Degradation in 28 days)	0
- TOC (mg C/g)	380
- CO2 evolution (modified Sturm test)	66

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
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

IATA	
Basic shipping requirements:	
UN number	UN2920
Proper shipping name	Corrosive liquid, flammable, n.o.s. (ETHANOL, QUATERNARY AMMONIUM COMPOUNDS)
Hazard class	8
Subsidiary hazard class	3
Packing group	II
Special transport precautions and conditions	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
Basic shipping requirements:	
UN number	UN2920
Proper shipping name	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ETHANOL, QUATERNARY AMMONIUM COMPOUNDS), MARINE POLLUTANT
Hazard class	8
Subsidiary hazard class	3
Packing group	II
Marine pollutant	Yes
EmS No.	F-E, S-C
Special transport precautions and conditions	Read safety instructions, SDS and emergency procedures before handling.
SEA (Annex II of MARPOL 73/78 and the IBC Code)	Not established.
IATA; IMDG	



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Marine pollutant



General information

IMDG Regulated Marine Pollutant.

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

Controlled Narcotic & Psychotropic Precursors List

Not regulated

CWC (Chemical Weapons Convention Act 2000, Schedules 1-3)

Not regulated

Hazardous Chemicals, Schedule 2: Threshold Quantities at an Isolated Storage (Manufacture, Storage and Import of Hazardous Chemical Rules 1989, as amended).

Not regulated

Hazardous Chemicals, Schedule 3: Threshold Quantities in an Industrial Installation (Manufacture, Storage and Import of Hazardous Chemical Rules 1989, as amended).

Not regulated

List of Hazardous Chemicals (Manufacture, Storage and Import of Hazardous Chemical Rules, Schedule I (Part II)).

Ethanol (CAS 64-17-5)

Ozone Depleting Substances (ODS) (Ozone Depleting Substances (Regulation and Control) Rules 2000, Schedule 1).

Not regulated

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

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Country(s) or region	Inventory name	On inventory (yes/no)*
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date	Dec-19-2008
Revision date	26/08/2020
Version #	10.0
References:	No data available
Disclaimer	The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold by him, as the case may be. The government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

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