COOLING TOWER

UNITED LABORATORIES

Safety Data Sheet

Issue Date 05-Nov-2015 **Revision Date** 10-May-2022 **Version** 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Product Name United 336 CYCLE SMART™ BIOCIDE

Other means of identification
SDS# UNITED – 336

Recommended use of the chemical and restrictions on use
Recommended use Cycle Smart™ Biocide Industrial Water Treatment
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet
Company Name
United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com

Emergency telephone number
Company Phone Number 800-323-2594 (to reorder)
Emergency Telephone INFOTRAC 1-800-535-5053
1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification

Acute Toxicity – Inhalation	Category 3
Acute Toxicity – Dermal	Category 4
Skin Corrosion	Category 1B
Serious Eye Damage	Category 1
Aquatic Hazard – Acute and Long-term	Category 1

Label elements

Danger

Hazard statement
Toxic if inhaled. Harmful in contact with skin. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting effects.



Precautionary Statements

Prevention
Obtain special instructions before use and read label before use. Keep out of reach of children. Wear protective eye and face protection. Wear protective clothing and protective gloves. Wear protective gloves. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

Response
If swallowed: Rinse mouth thoroughly. Do not induce vomiting. Call poison center or doctor immediately. **If on skin (or hair)**: Take off immediately all contaminated clothing. Rinse skin with water/shower and soap for several minutes. Wash contaminated clothing before reuse. Call poison center or doctor. **If inhaled**: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. **If in eyes**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention

Storage
Store locked up.

Disposal
Dispose of contents/container to comply with local/regional/national/international regulations.

Hazards not otherwise classified (HNOC) None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Tributyltetradecyl Phosphonium Chloride	81741-28-8	4.5 – 5.5	*

*Any concentration shown as a range is to protect confidentiality or is due to batch variation.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: DANGER. Corrosive. Avoid contact with eyes, skin and clothing. EPA Registration Number: 83451-16.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8 of this SDS.

4. FIRST AID MEASURES

First aid measures

General information If you feel unwell, seek medical advice (show the label where possible).

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. Chemical burns must be treated promptly by a doctor. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention. Call a poison center or doctor.

Eye contact Immediately flush with plenty of water occasionally lifting the upper and lower eyelids. Remove any contact lenses if present and easy to do. Continue rinsing for at least 10 minutes. Chemical burns must be treated promptly by a doctor.

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. If unconscious, place n recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. Call a poison center or doctor.

Ingestion Rinse mouth thoroughly. 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 that 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 it does not enter lungs. Chemical burns must be treated promptly by a doctor. 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. Get medical attention. Call a poison center.

Most important symptoms and effects, both acute and delayed

Inhalation Toxic if inhaled. Can irritate eyes, nose, mouth and throat. Adverse symptoms may include: wheezing and breathing difficulties.

Skin contact Causes severe burns. Harmful in contact with skin. Adverse symptoms may include: pain or irritation, redness, blistering may occur.

Eye contact Causes serious eye damage. Adverse symptoms may include: pain, watering, redness.

Ingestion May cause burns to mouth, throat and stomach. No known significant effects or critical hazards.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Contact poison center doctor immediately if large quantities have been ingested or inhaled.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
CO2. Foam. Dry chemicals. Water spray (fog) or foam.

Specific hazards arising from the chemical
In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic 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
In a fire, decomposition may produce toxic gases/fumes, carbon monoxide. Decomposition products may include the following materials; carbon dioxide, phosphorus oxides, metal oxide/oxides.

Protective equipment / advice and precautions for firefighters
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. Firefighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Emergency responders: If specialized clothing is required to deal with spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Environmental precautions

Environmental precautions	Avoid dispersal of spiled 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.

Methods and material for containment and cleaning up

Methods 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. Dispose of via a licensed waste disposal contractor. **Large spill**: Stop leak 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 college spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to the local regulations (Section 13).
Waste disposal	Dispose of container in accordance with local, state and federal laws. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Hygiene measures	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 Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Store in accordance with local regulations. 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. Keep container tightly closed and sealed until ready to 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. Keep away from food, drink and animal feeding stuffs. Keep away from: alkalis acids cyanide reducing agents oxidizing agents aluminum. Do not store above the following temperature 50°.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines	No exposure guidelines noted for ingredient(s).

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.

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.

Individual protection measures, such as personal protective 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 within 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Color	Colorless
Odor	Slight odor

Property	Values
pH	6-8
Relative density	0.96 – 1.00
Viscosity	No Information available
Melting point/freezing point	No Information available
Flash point	No information available.
Boiling point / boiling range	100°C
Evaporation rate	No Information available
Flammability (solid, gas)	No information available
Flammability Limits in Air	No information available
Upper flammability limit:	No Information available
Lower flammability limit:	No Information available
Vapor pressure	No Information available
Relative density	0.96-1.00 20°C
Vapor density	No information available

Water solubility	Miscible in water
Partition coefficient	No Information available
Autoignition temperature	No Information available
Decomposition temperature	No information available

10. STABILITY AND REACTIVITY

Reactivity
No specific reactivity hazards associated with this product.

Chemical stability
Stable under recommended storage conditions and recommended use.

Possibility of Hazardous Reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid
Keep away from heat and direct sunlight.

Incompatible materials
No specific information.

Hazardous Decomposition Products
Under normal conditions of storage and use, hazardous decomposition products should be produced. In a fire, decomposition may produce toxic gases/fumes. Decomposition products may include the following materials; carbon monoxide, carbon dioxide, phosphorus oxides, metal oxide/oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Tributyltetradecyl Phosphonium Chloride 81741-28-8	>4000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	0.9 mg/l 4 hr. (Rat)
Acute toxicity limits	10,000 mg/kg		

Delayed and immediate effects as well as acute and chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes skin burns. Harmful in contact with skin.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitization	Not a skin sensitizer. Toxic if inhaled.
Germ cell mutagenicity	No mutagenic in Ames test.
Carcinogenicity	No significant effects or critical hazards.
Reproductive toxicity	No significant effects or critical hazards.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation: Can irritate eyes, nose, mouth and throat. Adverse symptoms may include the following; wheezing and breathing difficulties.

Skin contact: Causes severe burns. Adverse symptoms may include the following; pain or irritation, redness, blistering may occur.

Ingestion: May cause burns to mouth, throat and stomach. Adverse symptoms may include the following; stomach pains, nausea or vomiting.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Persistence and degradability
This product is biodegradable, but it must not be discharged into drains without permission from the authorities.

Bioaccumulation
No information available.

Partition coefficient
No information available.

Mobility
No information available.

Other adverse effects
No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

When handling waste, consideration should be made to the safety precautions applying to handling of this product. Triple rinse drums prior to recycling or disposal.

The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed or untreated to the sewer unless fully compliant with the requirements of all authorities and jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

DOT

UN/ID No.	UN2922
Proper Shipping Name	Corrosive Liquid, Toxic, N.O.S. (contains tributyltetradecylphosphonium chloride).
Transport hazard class(es)	8 (6.1)
Packaging group	II

IATA

UN/ID No.	UN2922
Proper Shipping Name	Corrosive Liquid, Toxic, N.O.S. (contains tributyltetradecylphosphonium chloride).
Transport hazard class(es)	8 (6.1)
Packaging group	III

IMDG

UN/ID No.	UN2922
Proper Shipping Name	
Transport hazard class(es)	8 (6.1)
Packaging group	III

Environmental Class	Yes
Marine Pollutant	

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. REGULATORY INFORMATION

US Federal Regulations
United States – **TSCA 5(a)2** – Final significant new use rules: Phosphonium, tributyltetradecyl-,chloride.
United States – **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined. **TSCA 12(b) one-time export**: Phosphonium, tributyltetradecyl-,chloride.

SARA 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
No ingredients listed.

SARA 304 RQ
Not applicable.

SARA 311/312 Hazardous categories
Acute toxicity-dermal and inhalation. Skin corrosion and serious eye damage.

CERCLA Hazardous Substance List
None of the ingredients are listed.

CAA (Clean Air Act) Section 112(b) Hazardous Air Pollutants (HAPs) and Section 602 Class I Substances and Section 602 Class II Substances
None of the ingredients are listed.

DEA List I Chemicals (Precursor Chemicals) and (Essential Chemicals)
None of the ingredients listed.

FDA Precursor Chemical
None of the ingredient listed.

US State Regulations
None of the components are listed for RTK – Massachusetts, New York, New Jersey or Pennsylvania.

California Proposition 65
This product does not contain chemicals that require a Safe Harbor warning under California Prop 65.

Inventory List
Australia, Canada, China, Europe, New Zealand, Philippines, Korea, Taiwan, United States and Vietnam – all components listed or exempted.

16. OTHER INFORMATION

NFPA	**Health hazards** 3	**Flammability** 0	**Reactivity** 0	**Physical and Chemical Properties** Yes

HMIS	Health hazards 3	Flammability 0	Reactivity 0	Personal protection D

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Revision Note	Regulatory Revisions

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 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.

End of Safety Data Sheet