



## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

February 23, 2026

Jennifer Fulford  
jennifer.fulford@toxcel.com  
ENERGY SOLUTIONS (US), LLC

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment - To update label language  
Product Name: CYPHOS 3453W PHOSPHONIUM SALT  
Admin Number: 102007-1  
EPA Receipt Date: 12/09/2025  
Action Case Number: 00678457

Dear Jennifer Fulford:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have questions, please contact Emilia Oiguenblik via email at [oiguenblik.emilia@epa.gov](mailto:oiguenblik.emilia@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Luisa Samalot-Freire', written over a horizontal line.

Luisa Samalot-Freire, Product Manager - Team 31  
RMB1, AD  
Office of Pesticide Programs

# CYPHOS® 3453W Phosphonium Salt

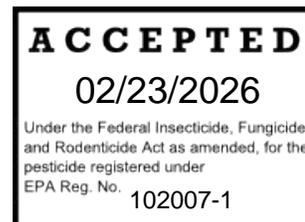
For use as an algicide, bactericide, fungicide, for the control of algae, slime forming bacteria, sulfate reducing bacteria, and fungi in air-washers and industrial air scrubbing systems, recirculating cooling water and process water systems including cooling towers, evaporative coolers, brewery pasteurizers, can warmers, and hydrostatic sterilizers and retorts, non-food contact paper and paperboard process water (e.g.: brown paper, corrugated sheet, Kraft paper, newsprint, etc.), and enhanced oil recovery systems, oil and gas production and transmission pipelines and systems, gas storage wells and systems, hydrotesting of pipelines and tanks, pipeline pigging and scraping operations and oil and gas well drilling and maintenance fluids.

FOR INDUSTRIAL APPLICATIONS using closed metered delivery systems only.

ACTIVE INGREDIENT: Tributyl Tetradecyl Phosphonium Chloride ..... 50.0%  
 OTHER INGREDIENTS ..... 50.0%  
 TOTAL: ..... 100.0%



**DANGER - POISON – PELIGRO**  
**KEEP OUT OF REACH OF CHILDREN**



{Note to Reviewer: In accordance with 40 CFR 156.68(d), all first aid statements, as prescribed, will appear on the front panel of the product label.}

FIRST AID	
<b>If Inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on Skin</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 or 703-527-3887 for emergency medical treatment information.	
<b>Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.</b>	

Manufactured by:  
 Energy Solutions (US) LLC  
 504 Carnegie Center  
 Princeton, NJ 08540



EPA REG. 102007-1  
 EPA EST. [xxxxxxxxxxxx]

NET WEIGHT: [##] lbs ([##]kg)

{MASTER LABEL}

{All text in brackets [xxx] is optional & may or may not be included on a printed label.}

{All text in braces {xxx} is administrative & will not appear on a printed label.}

{12/9/2025}

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER/PELIGRO – POISON**

Fatal if absorbed through skin or inhaled. **CORROSIVE.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Do not breathe spray mist. Wear respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or a canister approved for pesticides (NIOSH approval prefix number TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an N, R, P, or HE prefilter. Wear coveralls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, chemical resistant gloves, and protective eyewear (tightly fitting safety goggles and face shield). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

**PHYSICAL OR CHEMICAL HAZARDS:** Do not mix with other chemicals. Mix only with water.

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**DIRECTIONS FOR USE:**

**It is a violation of federal law to use this product in a manner inconsistent with its labeling.** Read entire label and use strictly in accordance with precautionary statements and directions.

This product must be loaded and transferred only using a metering-pump system or a closed loading/application system. Open pouring is prohibited. Wear coveralls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, chemical resistant gloves, and protective eyewear (goggles or face mask). Be sure to release any pressure in the container prior to fully opening. This can be done by loosening the closure prior to fully opening the container. **DO NOT OPEN WITH FACE CLOSE TO THE CONTAINER OPENING.**

**RECIRCULATING COOLING AND PROCESS WATER SYSTEMS / AIR WASHERS AND INDUSTRIAL AIR SCRUBBING SYSTEMS:**

When used as directed, this product effectively controls algal, bacterial, and fungal slimes in commercial and industrial cooling towers, evaporative condensers, heat exchange water systems, evaporative coolers, dairy sweetwater systems, industrial process water systems, brewery pasteurizers, can warmers, hydrostatic sterilizers and retorts, air washing systems equipped with a mist eliminator, and industrial air scrubbing systems. Add this product at a point of uniform mixing such as the basin area.

**DOSAGE RATES FOR ABOVE APPLICATIONS:**

Initial Dose: When the system is noticeably fouled, add 2.6 to 7.7 fluid ounces of product per 1000 gallons (20 to 60 milliliters/1000 liters) of water contained in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 1.3 to 3.8 fluid ounces of product per 1000 gallons (10 to 30 milliliters/1000 liters) of water contained in the system. Repeat as needed to maintain control.

Heavily fouled systems must be cleaned before treatment is begun.

[DAIRY SWEETWATER SYSTEM APPLICATIONS ARE NOT REGISTERED FOR USE IN CALIFORNIA]  
[BREWERY PASTEURIZERS, CAN WARMERS, HYDROSTATIC STABILIZERS OR RETORTS ARE NOT REGISTERED FOR USE IN CALIFORNIA]

[AIR-WASHER OR AIR SCRUBBER SYSTEM APPLICATIONS ARE NOT REGISTERED FOR USE IN CALIFORNIA]

**PULP, PAPER, AND PAPERBOARD MILLS:**

THIS PRODUCT IS ONLY FOR USE IN NON-FOOD APPLICATION, such as brown paper mills, sheet for corrugated board, Kraft paper, newsprint and similar paper / paperboard not intended for food contact uses.

- a) When used as directed this product effectively controls bacterial and fungal slimes in pulp, paper, and paperboard mill process water systems including white water systems. Treat water at critical areas in the system where mixing of the product will be uniform such as beaters, furnish chest, white-water tank, save-all, and broke chest. The frequency and duration of the treatment will depend upon the severity of the problem.

**DOSAGE RATES**

Initial Dose: When the system is noticeably fouled, add 0.5 to 3.0 pounds of this product per ton of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems must be cleaned before initial treatment.

Subsequent Dose: When biological control is evident, add 0.3 to 2.0 pounds of product per ton of pulp or paper (dry basis) as a slug dose as necessary to maintain control.

- b) When used as directed this product effectively controls bacterial and fungal slime in water-based coatings, starches, pigments and filler slurries. Do not use in paper and paperboard and adhesives that will contact food, such as brown paper mills, sheet for corrugated board, Kraft paper, newsprint and similar paper/paperboard not intended for food contact uses. The treatment rate necessary to retard spoilage of the additive will vary with the extent of the contamination of make-up water and the length of storage.

**DOSAGE RATES**

Apply 200-1000 ppm of product to the additive to be preserved based on the total weight of the additive and water.

[PULP, PAPER, AND PAPERBOARD MILLS APPLICATIONS ARE NOT REGISTERED FOR USE IN CALIFORNIA.]

**ENHANCED OIL RECOVERY SYSTEMS:**

**NOT FOR USE IN ESTUARINE OR MARINE OIL RECOVERY SYSTEMS.** When used as directed this product effectively controls slime-forming and sulfate-reducing bacteria in injection and produced water systems, water disposal systems, and other oilfield water systems. Treat water at critical points in the system such as water or oil storage tanks, surge tanks, oil-water separators, before or after injection pumps, and injection well headers.

**DOSAGE RATES FOR ENHANCED OIL RECOVERY SYSTEMS:** When the system is noticeably fouled, or to maintain control in the system, add 10-1000 ppm of this product into water as a slug dose for 1-8 hours per day, 1-4 times per week.

**OIL AND GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS:**

This product should be added at a point in the pipeline where uniform mixing will occur. The application should be conducted to ensure maximum distribution of product through the entire internal surface of the pipeline. Follow dosing instructions for enhanced oil recovery systems.

## **GAS STORAGE WELLS AND SYSTEMS:**

Individual injection wells should be treated with a sufficient quantity of product to produce a concentration of 10-1000 ppm of this product when diluted by the water present in the formation. Injections should be repeated as needed to maintain control.

Individual drips should be treated with sufficient quantity of this product to produce a concentration of 10-1000 ppm of this product when diluted by the water present in the drips. Injections should be repeated as needed to maintain control.

## **HYDROTESTING:**

Water used to hydrotest pipelines or vessels should contain 10-1000 ppm of product, depending on water quality and length of time the equipment will remain idle.

## **PIPELINE PIGGING AND SCRAPING OPERATIONS:**

Add this product to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and a trailing pig). Sufficient product should be added to produce a concentration of 10-1000 ppm of this product in the water at the discharge point or pig trap depending on the length of the pipeline and the severity of biofouling.

## **DRILLING, PACKER, COMPLETION, WORKOVER AND FRACTURING FLUIDS:**

This product should be added to these fluids at a point where uniform mixing will occur. Add 10-1000 ppm of this product to a freshly prepared fluid depending on the severity of contamination.

[ENHANCED OIL RECOVERY SYSTEMS ARE NOT REGISTERED FOR USE IN CALIFORNIA.]

### **STORAGE AND DISPOSAL:**

Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Keep product dry and store in a cool, dry, well-ventilated area away from heat or open flame. Store in original container.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

*{Text for non-refillable containers}*

**CONTAINER DISPOSAL:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. *{For containers of 5 gallons or less}* [Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.] *{For containers with capacities of greater than 5 gallons}* [Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

*{Text for refillable containers}*

{MASTER LABEL}

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{12/9/2025}

**CONTAINER DISPOSAL:** Refillable container. Refill this container with Tributyl tetradecyl phosphonium chloride only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

*{Bulk Shipment Transport Vehicles: In accordance with 40 CFR 156.140 (e) "Exemption for transport vehicles" transport vehicles are exempt from the requirements to provide refillable or nonrefillable container instructions, therefore, only pesticide storage and disposal is required on bulk transport vehicle labeling.}*

### **WARRANTY**

**Seller warrants that the product conforms to its chemical description and when used according to label directions under normal conditions of use, it is reasonably fit for the purpose stated on the label. To the extent consistent with applicable law, seller makes no other warranty, either expressed or implied, and buyer assumes all risk should the product be used contrary to label instructions.**

**{Optional Marketing Statements, may or may not appear on printed label:}**

[Tolcide is a registered trademark of Energy Solutions (US) LLC.]

**{Note to Reviewer -- EPA approved ABN: Tolcide® TP50}**

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{12/9/2025}