



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

February 8, 2017

Leesha Square
Regulatory Specialist
Lonza Inc.
90 Boroline Road
Allendale, NJ 07401

Subject: Label Amendment – To update label language
Product Name: Carboquat WP-50
EPA Registration Number: 6836-304
Application Date: June 23, 2016
Decision Number: 519292

Dear Ms. Square:

The amended label 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 conditions that were previously imposed on this registration. You continue to be subject to existing 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 copy of the final printed labeling before you release the 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 the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Emilia Oiguenblik by phone at

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703 347 0199, or via email at Oiguenblik.emilia@epa.gov or Eric Miederhoff by phone at 703 347 8028, or via email at Miederhoff.eric@epa.gov.

Sincerely,



Eric Miederhoff
Product Manager 31
Regulatory Management Branch I
Antimicrobials Division (7510P)
Office of Pesticide Programs

Enclosure: Stamped label

ACCEPTED

02/08/2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 6836-304

CARBOQUAT WP-50

Active Ingredients:

Didecyl dimethyl ammonium carbonate and
Didecyl dimethyl ammonium bicarbonate50.0%
Inert Ingredients:50.0%
TOTAL: 100.0%

Contains 7.9 lbs. of product per gallon at 25°C

KEEP OUT OF REACH OF CHILDREN DANGER

FIRST AID	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have a person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.	

SEE (SIDE) (LEFT) (RIGHT) (BACK) PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS [AND FIRST AID]

EPA Reg. No. 6836-304
EPA Est. No. 6836-IL-1
Net Contents _____

Manufactured by
LONZA, Inc., 90 Boroline Road, Allendale, NJ 07401

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed or inhaled. Do not get in eyes, on skin or clothing. Do not breathe vapor. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Harmful if absorbed through the skin.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long-pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Protective eyewear (chemicals splash goggles or face shield)

Individuals who enter pressure treatment cylinders and other related equipment that are contaminated with the wood treatment solution (e.g., cylinders that are in operation or are not free of the treatment solution) must wear the following PPE: long-sleeved shirt and long-pants, chemical-resistant gloves, chemical resistant footwear plus socks, protective eyewear (chemical splash goggles or face shield) and a respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

Protective clothing must be changed when it shows signs of contamination. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Applicators must not eat or drink, or use tobacco products during those parts of the application process that may expose them to the wood treatment formulation (e.g., manually opening/closing cylinder doors, moving trams out of cylinders, chemicals, handling freshly treated wood).

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic invertebrates. Do not contaminate water by cleaning of equipment or disposal of wash waters. 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.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

CARBOQUAT WP-50 is a concentrated biocide for use as a wood preservative. When used as directed, CARBOQUAT WP-50 will protect treated wood articles from the destructive attack of fungi, mold and mildew.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

CARBOQUAT WP-50 is an end-use product that is intended to be used with registered alkaline copper wood preservatives. Prepare a use-solution (0.6 -3.9% active) by mixing CARBOQUAT WP-50 with water and the copper product according to the attached mixing tables. CARBOQUAT WP-50 can also be used alone or in combination with other EPA-registered organic and inorganic wood preservatives, provided that mixing is not inconsistent with the labeling of any product in the mixture. [When mixed with Wolman E (CA-C), EPA Reg. No. 75506-10, Carboquat WP-50 should be mixed with Wolman E (CA-C) to prepare a 0.15 – 3.9% total active use solution.] When used alone, prepare a 0.5-3.0% active use-solution of CARBOQUAT WP-50 in water. A closed-system must be used when preparing the use-solution and for delivery of the use-solution to the treatment vessel.

PRESSURE TREATMENT INSTRUCTIONS

Place the wood article to be treated into the pressure cylinder and seal unit. Treat the wooden articles using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be calibrated to yield a 0.05 to 0.2 lb/ft³ (0.8 to 3.2 kg/m³) active retention in the treated article of didecyl dimethyl ammonium carbonate/bicarbonate. [When used in combination with Wolman E (CA-C), the total active retention in the treated article should be between 0.05 and 0.6 lbs/ft³ (0.8 – 10.0 kg/m³).] When used as a moldicide in combination with other EPA-registered wood preservatives the active retention can be reduced to provide the required mold protection. A final vacuum should be used during treatment process to remove any excess treatment solution from surface of treated wood article. Consult the CARBOQUAT WP-50 Technical Bulletin for additional information.

DIP TREATMENT (Not for use in California)

Stack the wood to be treated on a suitable holder and convey the stack into the treating solution making sure that the stack is completely immersed. Dip times should range from 30 seconds (individual pieces) up to 30 minutes (bundled wooden articles). Use a concentration of 0.5 – 3.0% active didecyl dimethyl ammonium carbonate/bicarbonate; the concentration should be customized to the degree of sapstain protection desired, which should be determined by an independent test on the intended species of wood. When used as a moldicide the concentration can be reduced to provide the required mold protection.

SPRAY-BOX APPLICATION (Not for use in California)

For sapstain and mold protection only; a negative-pressure spraybox equipped with effective mist elimination may be used. Prepare the treating solution by adding 1 gallon CARBOQUAT WP-50 to 15 - 30 gallons of water. The concentration should be customized to achieve the degree of sapstain protection desired, which should be determined by an independent test on the intended species of wood. When used as a moldicide the concentration can be reduced to provide the required mold protection. Mix thoroughly to ensure uniform composition. Application rates will vary according to wood species and moisture content, temperature, humidity, storage conditions and inoculum pressure. Ensure that the treatment conditions are such that the wood articles are uniformly covered with the treating solution. Monitor spray booth mixtures to ensure proper concentrations are being maintained.

NOTE: CARBOQUAT WP-50 cannot be used to treat wood intended for direct continuous salt water (marine) immersion. Treated wood must be marked accordingly. In addition, CARBOQUAT WP-50 is not approved for treating wooden articles that are used or intended for use in the packaging of food or feed.

(Note to reviewer: For Nonrefillable Containers for commercial, industrial, and institutional uses. Chapter 13, Table 6 of the Label Review Manual states that for “All products in containers that could be burned,” the registrant has the option to “Remain silent on burning;” therefore, no incineration language is provided for plastic containers.)

STORAGE AND DISPOSAL

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

Pesticide Storage:

Do not store on side. Avoid creasing or impacting of side walls.

Pesticide Disposal:

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these pesticides 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.

(Note to reviewer: This Container Statement will be used only for containers 5 gallons or less:)

Container Disposal:

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. ***(Plastic and Metal Containers:)*** 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. Then offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations. DO NOT cut or weld metal containers.

(Note to reviewer: This Container Statement will be used for containers over 5 gallons:)

Container Disposal:

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. ***(Plastic and Metal Containers:)*** 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. Then offer for recycling or reconditioning if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations. DO NOT cut or weld metal containers.

(Tote Container:)

Nonrefillable container. Do not reuse or refill this container. Empty tote container must be returned to a tote collection agent.

Residue Removal – Cleaning container before final disposal is the responsibility of the person disposing of the container. To clean container before final disposal, fill container about 10 percent full with water; agitate container vigorously; discard rinsate according to pesticide disposal instructions; repeat this rinsing procedure two more times. For additional container disposal information, contact product supplier.

(Note to reviewer: For Refillable Containers. Chapter 13, Table 6 of the Label Review Manual states that for "All products in containers that could be burned," the registrant has the option to "Remain silent on burning;" therefore, no incineration language is provided for plastic containers.)

STORAGE AND DISPOSAL

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

Pesticide Storage:

Open dumping is prohibited. Store in original container in areas inaccessible to children.

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.

Container Disposal:

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before refilling is the responsibility of the refiller. Cleaning the container before final disposal is the responsibility of the person disposing of the container.

(Plastic or Metal Containers:) 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. Then offer for recycling or reconditioning. If not available, puncture and dispose in sanitary landfill. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state, and federal regulations.

(For metal containers only: DO NOT cut or weld metal containers.)

1:1 Solution Mixing Table for (8%) Alkaline Copper and DDACarbonate (2 Component System)

Solution Strength (%)	Component Balance Actives basis		To mix 1000 gallons solution Combine the following gallons of		
	% Active CuO	% DDACarbonate	8% Alkaline Copper	DDACarbonate (50%)	Water
0.60	0.30	0.30	25.4	6.4	968.2
0.65	0.33	0.33	27.5	6.9	965.6
0.70	0.35	0.35	29.7	7.4	962.9
0.75	0.38	0.38	31.8	8.0	960.2
0.80	0.40	0.40	33.9	8.5	957.6
0.85	0.43	0.43	36.0	9.0	955.0
0.90	0.45	0.45	38.1	9.6	952.3
0.95	0.48	0.48	40.3	10.1	949.6
1.00	0.50	0.50	42.4	10.6	947.0
1.10	0.55	0.55	46.6	11.7	941.7
1.20	0.60	0.60	50.8	12.8	936.4
1.30	0.65	0.65	55.1	13.8	931.1
1.40	0.70	0.70	59.3	14.9	925.8
1.50	0.75	0.75	63.6	16.0	920.4
1.60	0.80	0.80	67.8	17.0	915.2
1.70	0.85	0.85	72.0	18.1	909.9
1.80	0.90	0.90	76.3	19.1	904.6
1.90	0.95	0.95	80.5	20.2	899.3
2.00	1.00	1.00	84.7	21.3	894.0
2.10	1.05	1.05	89.0	22.3	888.7
2.20	1.10	1.10	93.2	23.4	883.4
2.30	1.15	1.15	97.5	24.5	878.0
2.40	1.20	1.20	101.7	25.5	872.8
2.50	1.25	1.25	105.9	26.2	867.9
2.60	1.30	1.30	110.2	27.7	862.1
2.70	1.35	1.35	114.4	28.7	856.9
2.80	1.40	1.40	118.6	29.8	851.6
2.90	1.45	1.45	122.9	30.9	846.2
3.00	1.50	1.50	171.1	31.9	797.0
3.10	1.55	1.55	131.4	33.0	835.6
3.20	1.60	1.60	135.6	34.0	830.4
3.30	1.65	1.65	139.8	35.1	825.1
3.40	1.70	1.70	144.1	36.2	819.7
3.50	1.75	1.75	148.3	37.2	814.5
3.60	1.80	1.80	152.5	38.3	809.2
3.70	1.85	1.85	156.8	39.4	803.8
3.80	1.90	1.90	161.0	40.4	798.6
3.90	1.95	1.95	165.3	41.5	793.2

2:1 Solution Mixing Table for (8%) Alkaline Copper and DDACarbonate (2 Component System)

Solution Strength (%)	Component Balance Actives basis		To mix 1000 gallons solution Combine the following gallons of		
	% Active CuO	% DDACarbonate	8% Alkaline Copper	DDACarbonate (50%)	Water
0.60	0.40	0.20	33.9	4.3	961.8
0.65	0.43	0.22	36.7	4.6	958.7
0.70	0.47	0.23	39.6	5.0	955.4
0.75	0.50	0.25	42.4	5.3	952.3
0.80	0.53	0.27	45.2	5.7	949.1
0.85	0.57	0.28	48.1	6.0	945.9
0.90	0.60	0.30	50.8	6.4	942.8
0.95	0.63	0.32	53.6	6.7	939.7
1.00	0.67	0.33	56.5	7.1	936.4
1.10	0.73	0.37	62.1	7.8	930.1
1.20	0.80	0.40	67.8	8.5	923.7
1.30	0.87	0.43	73.5	9.2	917.3
1.40	0.93	0.47	79.1	9.9	911.0
1.50	1.00	0.50	84.7	10.6	904.7
1.60	1.07	0.53	90.4	11.3	898.3
1.70	1.13	0.57	96.0	12.1	891.9
1.80	1.20	0.60	101.7	12.8	885.5
1.90	1.27	0.63	107.4	13.5	879.1
2.00	1.33	0.67	113.0	14.3	872.7
2.10	1.40	0.70	118.6	14.9	866.5
2.20	1.47	0.73	124.3	15.6	860.1
2.30	1.53	0.77	129.9	16.3	853.8
2.40	1.60	0.80	135.6	17.0	847.4
2.50	1.67	0.83	141.3	17.7	841.0
2.60	1.73	0.87	146.9	18.4	834.7
2.70	1.80	0.90	152.5	19.1	828.4
2.80	1.87	0.93	158.2	19.9	821.9
2.90	1.93	0.97	163.8	20.6	815.6
3.00	2.00	1.00	169.5	21.3	809.2
3.10	2.07	1.03	175.2	22.0	802.8
3.20	2.13	1.07	180.8	22.7	796.5
3.30	2.20	1.10	186.4	23.4	790.2
3.40	2.27	1.13	192.1	24.1	783.8
3.50	2.33	1.17	197.5	24.8	777.7
3.60	2.40	1.20	203.4	25.5	771.1
3.70	2.47	1.23	209.1	26.2	764.7
3.80	2.53	1.27	214.7	27.0	758.3
3.90	2.60	1.30	220.3	27.7	752.0

1:1 Solution Mixing Table for (11.25% CuO) Alkaline Copper and DDACarbonate (2 Component System)

Solution Strength %	Component Balance Actives Basis (%)		To Mix 1000 Gallons Solution Combine following Gallons of		
	Active CuO	DDACarbonate	11.25% ACQ C2	DDACarbonate (50%)	Water
0.60%	0.3%	0.3%	21.67	6.54	984.87
0.65%	0.325%	0.325%	23.47	7.08	983.61
0.70%	0.35%	0.35%	25.28	7.63	982.35
0.75%	0.375%	0.375%	27.08	8.17	981.09
0.80%	0.4%	0.4%	28.89	8.72	979.83
0.85%	0.425%	0.425%	30.69	9.26	978.57
0.90%	0.45%	0.45%	32.50	9.81	977.31
0.95%	0.475%	0.475%	34.30	10.35	976.05
1.00%	0.5%	0.5%	36.11	10.90	974.79
1.10%	0.55%	0.55%	39.72	11.98	972.26
1.20%	0.6%	0.6%	43.33	13.07	969.74
1.30%	0.65%	0.65%	46.94	14.16	967.22
1.40%	0.7%	0.7%	50.55	15.25	964.70
1.50%	0.75%	0.75%	54.17	16.34	962.18
1.60%	0.8%	0.8%	57.78	17.43	959.66
1.70%	0.85%	0.85%	61.39	18.52	957.13
1.80%	0.9%	0.9%	65.00	19.61	954.61
1.90%	0.95%	0.95%	68.61	20.70	952.09
2.00%	1%	1%	72.22	21.79	949.57
2.10%	1.05%	1.05%	75.83	22.88	947.05
2.20%	1.1%	1.1%	79.44	23.97	944.53
2.30%	1.15%	1.15%	83.05	25.06	942.01
2.40%	1.2%	1.2%	86.66	26.15	939.48
2.50%	1.25%	1.25%	90.28	27.24	936.96
2.60%	1.3%	1.3%	93.89	28.33	934.44
2.70%	1.35%	1.35%	97.50	29.42	931.92
2.80%	1.4%	1.4%	101.11	30.51	929.40
2.90%	1.45%	1.45%	104.72	31.60	926.88
3.00%	1.5%	1.5%	108.33	32.69	924.36
3.10%	1.55%	1.55%	111.94	33.77	921.83
3.20%	1.6%	1.6%	115.55	34.86	919.31
3.30%	1.65%	1.65%	119.16	35.95	916.79
3.40%	1.7%	1.7%	122.77	37.04	914.27
3.50%	1.75%	1.75%	126.39	38.13	911.75
3.60%	1.8%	1.8%	130.00	39.22	909.23
3.70%	1.85%	1.85%	133.61	40.31	906.70
3.80%	1.9%	1.9%	137.22	41.40	904.18
3.90%	1.95%	1.95%	140.83	42.49	901.66

1:1 Solution Mixing Table for (9%) Alkaline Copper and DDACarbonate (2 Component System)

Solution Strength %	Component Balance Actives Basis (%)		To Mix 1000 Gallons Solution Combine following Gallons of		
	Active CuO	DDACarbonate	9% Alkaline Copper	DDACarbonate (50%)	Water
0.60%	0.3%	0.3%	21.67	6.54	984.87
0.65%	0.325%	0.325%	23.47	7.08	983.61
0.70%	0.35%	0.35%	25.28	7.63	982.35
0.75%	0.375%	0.375%	27.08	8.17	981.09
0.80%	0.4%	0.4%	28.89	8.72	979.83
0.85%	0.425%	0.425%	30.69	9.26	978.57
0.90%	0.45%	0.45%	32.50	9.81	977.31
0.95%	0.475%	0.475%	34.30	10.35	976.05
1.00%	0.5%	0.5%	36.11	10.90	974.79
1.10%	0.55%	0.55%	39.72	11.98	972.26
1.20%	0.6%	0.6%	43.33	13.07	969.74
1.30%	0.65%	0.65%	46.94	14.16	967.22
1.40%	0.7%	0.7%	50.55	15.25	964.70
1.50%	0.75%	0.75%	54.17	16.34	962.18
1.60%	0.8%	0.8%	57.78	17.43	959.66
1.70%	0.85%	0.85%	61.39	18.52	957.13
1.80%	0.9%	0.9%	65.00	19.61	954.61
1.90%	0.95%	0.95%	68.61	20.70	952.09
2.00%	1%	1%	72.22	21.79	949.57
2.10%	1.05%	1.05%	75.83	22.88	947.05
2.20%	1.1%	1.1%	79.44	23.97	944.53
2.30%	1.15%	1.15%	83.05	25.06	942.01
2.40%	1.2%	1.2%	86.66	26.15	939.48
2.50%	1.25%	1.25%	90.28	27.24	936.96
2.60%	1.3%	1.3%	93.89	28.33	934.44
2.70%	1.35%	1.35%	97.50	29.42	931.92
2.80%	1.4%	1.4%	101.11	30.51	929.40
2.90%	1.45%	1.45%	104.72	31.60	926.88
3.00%	1.5%	1.5%	108.33	32.69	924.36
3.10%	1.55%	1.55%	111.94	33.77	921.83
3.20%	1.6%	1.6%	115.55	34.86	919.31
3.30%	1.65%	1.65%	119.16	35.95	916.79
3.40%	1.7%	1.7%	122.77	37.04	914.27
3.50%	1.75%	1.75%	126.39	38.13	911.75
3.60%	1.8%	1.8%	130.00	39.22	909.23
3.70%	1.85%	1.85%	133.61	40.31	906.70
3.80%	1.9%	1.9%	137.22	41.40	904.18
3.90%	1.95%	1.95%	140.83	42.49	901.66

2:1 Solution Mixing Table for (9%) Alkaline Copper and DDACarbonate (2 Component System)

Solution Strength %	Component Balance Actives Basis (%)		To Mix 1000 Gallons Solution Combine following Gallons of		
	Active CuO	DDACarbonate	9% Alkaline Copper	DDACarbonate (50%)	Water
0.60%	0.400%	0.200%	28.1	4.17	967.7
0.65%	0.433%	0.217%	30.5	4.52	965.0
0.70%	0.467%	0.233%	32.8	4.87	962.3
0.75%	0.500%	0.250%	35.2	5.23	959.6
0.80%	0.533%	0.267%	37.6	5.58	956.9
0.85%	0.567%	0.283%	39.9	5.93	954.1
0.90%	0.600%	0.300%	42.3	6.28	951.4
0.95%	0.633%	0.317%	44.7	6.64	948.7
1.00%	0.667%	0.333%	47.1	6.99	945.9
1.10%	0.733%	0.367%	51.8	7.70	940.5
1.20%	0.800%	0.400%	56.6	8.41	935.0
1.30%	0.867%	0.433%	61.4	9.12	929.4
1.40%	0.933%	0.467%	66.2	9.84	923.9
1.50%	1.000%	0.500%	71.1	10.55	918.4
1.60%	1.067%	0.533%	75.9	11.27	912.8
1.70%	1.133%	0.567%	80.7	11.99	907.3
1.80%	1.200%	0.600%	85.6	12.71	901.7
1.90%	1.267%	0.633%	90.5	13.43	896.1
2.00%	1.333%	0.667%	95.4	14.16	890.5
2.10%	1.400%	0.700%	100.2	14.89	884.9
2.20%	1.467%	0.733%	105.2	15.61	879.2
2.30%	1.533%	0.767%	110.1	16.35	873.6
2.40%	1.600%	0.800%	115.0	17.08	867.9
2.50%	1.667%	0.833%	120.0	17.81	862.2
2.60%	1.733%	0.867%	124.9	18.55	856.5
2.70%	1.800%	0.900%	129.9	19.29	850.8
2.80%	1.867%	0.933%	134.9	20.03	845.1
2.90%	1.933%	0.967%	139.9	20.77	839.4
3.00%	2.000%	1.000%	144.9	21.51	833.6
3.10%	2.067%	1.033%	149.9	22.26	827.8
3.20%	2.133%	1.067%	154.9	23.01	822.1
3.30%	2.200%	1.100%	160.0	23.76	816.3
3.40%	2.267%	1.133%	165.0	24.51	810.4
3.50%	2.333%	1.167%	170.1	25.26	804.6
3.60%	2.400%	1.200%	175.2	26.02	798.8
3.70%	2.467%	1.233%	180.3	26.77	792.9
3.80%	2.533%	1.267%	185.4	27.53	787.0
3.90%	2.600%	1.300%	190.6	28.29	781.2

**Technical Bulletin
Carboquat WP-50
Wood Preservative for Pressure Treatment**

1. Introduction

Carboquat WP-50 is a 50% concentrate solution of Didecyl dimethyl ammonium carbonate and Didecyl dimethyl ammonium bicarbonate. It is a waterborne preservative used to protect wood articles from the destruction by fungal decay, mold and mildew. Carboquat WP-50 is to be applied only by wood preserving plants to pressure treat wood articles.

Wood articles treated with Carboquat WP-50 are appropriate for use in above-ground, ground contact and fresh water contact applications and resist attack by rot and fungal decay. Carboquat WP-50 cannot be used to treat wood intended for direct continuous salt water (marine) immersion. Restrictions and limitations will be included on the treated wood end tag.

2. Description of the Preservative System

Carboquat WP-50 is an end-use product, intended for sale to wood treating plants. It can be used alone or in combination with other EPA-registered organic and inorganic wood preservatives, provided that mixing is not inconsistent with the labeling of any product in the mixture. Registered alkaline copper wood preservatives are particularly appropriate to use with Carboquat WP-50 to produce a copper-quat mixture.

Carboquat WP-50 is shipped as a 50 percent concentrate. It must be diluted to a working strength of from 0.6 to 3.9 % active by mixing Carboquat WP-50 with water and the copper product before application. When used alone, prepare a 0.5 to 3.0% active use-solution of Carboquat WP-50 in water. A mix table for half-percent increments in concentrate is attached.

3. Materials to be Treated

Carboquat WP-50 is used to pressure treat the following materials:

- 3.1 Dimensional lumber and timbers of the following sapwood species: Southern Pine, Ponderosa Pine, Red Pine, Radiata Pine and Caribbean Pine;
- 3.2 Dimensional lumber and timbers of the following heartwood species: Douglas-Fir, Western Hemlock, Hem-Fir, Lodgepole Pine, Jack Pine and Redwood;
- 3.3 Maximum nominal size of 2-by-8 in all listed species for decking use only;
- 3.4 Southern Pine and Douglas-Fir plywood;
- 3.5 Round and sawn posts and building poles of Southern Pine, Ponderosa Pine, Red Pine, Douglas-Fir, Hem-Fir and Western Hemlock.

Minimum preservative retention levels are provided below in **Table 1**.

Table 1
Minimum Preservative Retention Requirements
for Wood Treated with
Carboquat WP-50 Articles by End Use

End Use	Min. Activities ¹ Retention of CuO + quat pcf (Kg/m ³)	Min. Activities ¹ Retention of quat pcf (Kg/m ³)
Above Ground - General Use	0.15 (2.4)	0.05(0.80)
Ground & Fresh Water Contact	0.40 (6.4)	0.13 (2.11)
Critical Structural Members	0.60 (9.6)	0.20 (3.20)
Wood Foundation Systems	0.60 (9.6)	0.20 (3.20)

Table 1 Note:

¹ Pounds of preservative per cubic foot of wood.

4. Wood Treatment

Plant Equipment: Treating plants shall be equipped with the thermometers, gauges, and recorders necessary to indicate and record accurately the conditions within the treating cylinder during all stages of treatment. Whenever it is practicable the material in any charge shall consist of pieces of the same species similar in form and size, moisture content and receptivity to treatment.

Marking: Lumber, timber, and plywood shall be marked to indicate the intended end use "**above ground**," "**ground & fresh water contact**" identifying both the preservative and the specified retention.

Manner of Treatment: The material shall be impregnated with preservative by a combination of such processes and under such conditions as will produce a satisfactory product for the use intended as described below:

Empty Cell Treatment: Prior to the introduction of preservative, material shall be subjected to atmospheric air pressure or to higher air pressures of the necessary intensity and duration. A final vacuum of not less than -77 kPa (22 in. Hg) shall be used.

Modified Full Cell Treatment: Prior to introduction of preservative, material shall be subjected to a vacuum of less than -77 kPa (22 in. Hg) (sea level equivalent). A final vacuum of not less than -77 kPa (22 in. Hg) shall be used.

Full Cell Treatment: Prior to introduction of preservative or during any period of condition prior to treatment, material shall be subjected to a vacuum of not less than -77kPa (22 in. Hg.) (sea level equivalent). A final vacuum of not less than 560 Kg/m³ (22 in.) of mercury shall be used.

Initial Air Pressure or Vacuum shall be maintained while the cylinder is being filled with preservative. Pressure shall be maintained until the desired volumetric injection has been obtained.

At the conclusion of the pressure period and after the cylinder has been emptied of preservative, a vacuum of not less than -77kPa (22 in. Hg.) at sea level may be created. This results in the material having drier surfaces upon removal from the cylinder.

5. Results of Treatment

Preservative Retention: Retentions shall be determined by wood assay or by plant gauge. Where retention by assay is specified, the retention shall be determined by extraction or analysis of the treated wood. Where retention by gauge is specified, the amount of preservative solution retained shall be determined from readings of working tank gauges or scales.

The minimum preservative retention levels to ensure adequate preservation are shown above in **Table 1**.

The vacuum-pressure treating process described in American Wood-Preservers' Association (AWPA) Commodity Standard C1-00 and in the Processing and Treatment Standard of the Use Category System (UCS) shall be used to produce wood articles treated with Carboquat WP-50.

6. Installation and Application

Wood articles pressure treated with Carboquat WP-50 are installed as preservative-treated lumber timbers and plywood in accordance with requirements of the applicable *Code*. The industry published installation instructions for wood and pressure-treated wood shall be strictly adhered to.

Wood articles pressure treated with Carboquat WP-50 are permitted in locations where wood is used and/or in locations required by the applicable *Code* to use building materials which are fungal decay resistant. The treated wood members are listed for use in above-ground and ground contact applications. Typical applications are listed below in **Table 2**.

Surface treat cut ends with appropriate registered preservative solution.

Locations requiring preservative-treated wood for fungal decay are listed in:

Section 2304.11 *International Building Code*
Section 2304 *Standard Building Code*
Section 2311 *BOCA National Building Code*
Section 2306 *Uniform Building Code*TM
Sections R323, R324 *International Residential Code*TM for One- and Two-Family Dwellings
Sections 322, 323 *International One and Two Family Dwelling Code*.

Table 2
Typical Applications
for Carboquat WP-50 Pressure Treated Wood Articles

Service Conditions	Typical Applications
Above Ground	Decking, Rails, Spindles, Trim and Fascia, Framing, Flooring, Sill Plates, Trellises, Gazebos, Fencing
Ground & Fresh Water Contact	Deck & Dock Support Posts, Fence Posts
Critical Structural	Permanent Wood Foundations, Building Poles

Structural - The maximum load duration factor allowed for structural articles pressure-treated with Carboquat WP-50 shall be 1.6 in accordance with section 2.3 of the **AFPA, National Design Specification for Wood Construction**.