

VARIQUAT<sup>®</sup> LC80  
Algicide

May 1973

QUATERNARY AMMONIUM COMPOUND FOR CONTROL OF ALGAE IN SWIMMING POOLS  
(EPA Registration No. 18533-1)

- 2 -

DESCRIPTION: VARIQUAT LC80 algicide is an excellent algae control agent for use in swimming pools. At use levels as low as 2.5 ppm (2 ppm active) in water, growth of the following algae is prevented:

Chlorella pyrenoidosa  
Phormidium inundatum  
Phormidium retzii

TYPICAL PROPERTIES

Form	Colorless viscous liquid
pH	Neutral
Specific Gravity 25°C	0.94; 7.8 lb/gal
Composition	
Active Ingredients	
Alkyl (61% C <sub>12</sub> , 23% C <sub>14</sub> , 11% C <sub>16</sub> , 3% C <sub>10</sub> , 2% C <sub>18</sub> ) dimethylbenzyl ammonium chloride	80.0%
Inert Ingredients	20.0%

ACCEPTED  
JUL 24, 1973  
UNDER THE FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC POISON REGISTERED  
UNDER NO. 18533-1 SUBJECT  
TO ATTACHED COMMENTS.

A suitable concentrate for retail sale could contain 10% active quaternary, and would be prepared by mixing 1 part (by weight) VARIQUAT LC80 with 7 parts (by weight) of water. A specimen label for such a formulated product is included in this data sheet.

The following addition pattern is recommended when using a formulated swimming pool algicide containing 10% active quaternary.

If pool is clear initially, add one gallon of 10% active quaternary solution for each 50,000 gallons of water. This corresponds to a level of 2 ppm active quaternary in the pool. Thereafter, maintain this level by adding one quart of 10% active product every 3 to 5 days.

If algae are visible at the start, add 4 gallons of 10% active product for each 50,000 gallons of water. Allow algae to agglomerate, then clean out the pool. After cleaning, proceed as if the pool were clear initially, as described above.

All formulated algicidal products must carry an EPA Registration Number on labels when sold in interstate commerce. This is obtained from the Environmental Protection Agency, Pesticides Office, Washington, D.C. 20250. Test data are required for registration.

CAUTION: Special care must be exercised when handling VARIQUAT LC80. The following precautions must be observed.

DANGER: KEEP OUT OF REACH OF CHILDREN

Corrosive. Causes eye damage and skin irritation. Do not get in eyes, on skin or clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

First Aid

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, promptly drink a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

Note to Physician

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes. Keep out of lakes, streams, or ponds.

CODE: 5645-2700

ACCEPTED  
JUL 24, 1973  
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FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC POISON REGISTERED  
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TO ATTACHED COMMENTS.

# Ashland Chemicals

EPA EST. NO.  
18533-WI-1

## VARIQUAT® 50MG

EPA REG. NO.  
18533-2

### QUATERNARY AMMONIUM COMPOUND

GERMICIDAL CONCENTRATE OR FOR FORMULATING SWIMMING POOL ALGICIDES

**ACTIVE INGREDIENTS:**

Alkyl (50%C14, 40%C12, 10%C16) dimethylbenzyl ammonium chlorides -----50.0%

Isopropyl alcohol -----7.5%

**INERT INGREDIENTS:** Water -----42.5%

Total ----- 100.0%

**DIRECTIONS:** See Technical Bulletin for suggested uses.

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes. Keep out of lakes, streams, or ponds. Apply this product only as specified on this label.

Rinse empty containers thoroughly with water and discard.

See other precautions and First Aid.

**DANGER! KEEP OUT OF REACH OF CHILDREN**

Corrosive. Causes severe eye and skin damage.

Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed.

Avoid contamination of food.

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**FIRST AID:** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before re-use. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

FOR FORMULATION OF GERMICIDES AND ALGICIDES ONLY

ACCEPTED

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UNDER THE FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC POISON REGISTERED  
ED UNDER NO. 18533-2

FOR FORMULATION OF GERMICIDES AND ALGICIDES ONLY

**DANGER** — Corrosive. Causes severe eye and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

**FIRST AID:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before re-use. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.



**VARIQUAT® 50MC**

QUATERNARY AMMONIUM COMPOUND GERMICIDAL CONCENTRATE OR FOR FORMULATING SWIMMING POOL ALGICIDES

(EPA EST. NO. 18533-WI-1)

(EPA REG. NO. 18533-2)

**ACTIVE INGREDIENTS:**

Alkyl (50% C14, 40% C12, 10% C16) dimethylbenzyl ammonium chlorides	50.0%
Isopropyl alcohol	7.5%

**INERT INGREDIENTS:**

Water	42.5%
Total	100.0%

**DIRECTIONS:**

See Technical Bulletin for suggested uses.

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes. Keep out of lakes, streams, or ponds. Apply this product only as specified on this label.

Rinse empty containers thoroughly with water and discard. See other precautions and First Aid on left panel.

**NOTE TO PHYSICIAN:**

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

**NET CONTENTS:**

CP-6000

**DANGER: KEEP OUT OF REACH OF CHILDREN**

ASHLAND CHEMICAL CO • DIVISION OF ASHLAND OIL, INC. • P. O. BOX 2219, COLUMBUS, OHIO 43216 (614) 889-3333

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18533-4

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UNDER THE FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR FOOD AND DRUGS ADMINISTRATION REGISTERED  
UNDER NO. 18533-4 SUBJECT  
TO ATTACHED COMMENTS.

**DANGER:**

**KEEP OUT OF REACH  
OF CHILDREN**

Corrosive: Causes severe eye and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

**FIRST AID:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before re-use. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.



**VARIQUAT® 80MC  
GERMICIDAL CONCENTRATE**

(EPA REG. NO. 18533-4)

**ACTIVE INGREDIENTS:**

Alkyl (50%C14, 40%C12, 10%C16)	
dimethylbenzyl ammonium chlorides .....	80.0%
Isopropyl alcohol .....	12.0%

**INERT INGREDIENTS:**

.....	8.0%
Total .....	100.0%

**FOR FORMULATION OF GERMICIDES ONLY**

**DIRECTIONS:**

See Technical Bulletin for suggested uses.

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes. Keep out of lakes, streams, or ponds.

Do not reuse empty drum. Return to drum conditioner or destroy by perforating or crushing and burying in a safe place.

See other precautions and First Aid on left panel.

**NOTE TO  
PHYSICIAN:**

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.