

DANGER: CORROSIVE: Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling this product. Harmful or fatal if swallowed. Avoid contamination of food.

STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

Consult the label for other instructions and precautionary statements before use of FMB 4500 Quats.

FMB 4500-5 Quat	EPA Reg. No. 47371-16
FMB 4500-8 Quat	EPA Reg. No. 47371-12
FMB 4500-28 Quat	EPA Reg. No. 47371-22

H&S Chemicals Division  
970 East Tipton Street  
Huntington, Indiana 46750  
219/356-8100

ACCEPTED  
with COMMENTS  
by EPA Letter # 1082

OCT 27 1982

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, this pesticide registered under EPA Reg. No.

47371-12

BEST DOCUMENT AVAILABLE

27 OCT 1982

H & S Chemicals Division  
970 East Tipton St.  
Huntington, IN 46750

Attention: Mr. Richard Sheets

Gentlemen:

Subject: FMS 4500-8 Quat Concentrated  
Germicide  
EPA Registration No. 47371-12  
Your Submission of September 14, 1982

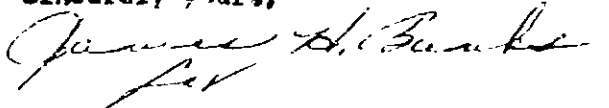
The amendment referred to above, submitted in connection with registration under FIFRA sec. 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,



John H. Lee  
Product Manager (31)  
Disinfectants Branch  
Registration Division (TS-767C)

Enclosure

TS-767C:LEE:DCR-23928:WANG-0584C:ert:Raven:479-2013:10/7/82

PK 31

47371-12

1 of 9

# Huntington

## FMB 4500-8 QUAT concentrated germicide

FOR FORMULATION OF DISINFECTANTS, SANITIZERS, FUNGICIDES, WATER TREATMENT MONITORING, SWIMMING POOL ALGACIDES, MILDERICIDES, OR FIELD WATER FLOOD AND SALT WATER DISPOSAL PRODUCTS.

<b>ACTIVE INGREDIENTS:</b>	
n-Allyl (C14 60%, C18 30%, C12 5%, C18 5%) dimethyl benzyl ammonium chloride .....	80.0%
<b>INERT INGREDIENTS</b> .....	20.0%
<b>Total</b> .....	<b>100.0%</b>

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

**STATEMENT OF PRACTICAL TREATMENT**  
In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
Corrosive. Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling the concentrate. Harmful or fatal if swallowed. Avoid contamination of food.

**ENVIRONMENTAL HAZARDS**  
This product is toxic to fish. Do not apply in marine and/or estuarine off fields. Do not discharge into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. For guidance, contact your Regional Office of the Environmental Protection Agency.

**PHYSICAL AND CHEMICAL HAZARDS**  
Do not use or store near heat or open flame. FMB 4500-8 is a cationic germicide. Do not mix with soap or anionic materials.

**STORAGE AND DISPOSAL**  
This product must be kept under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

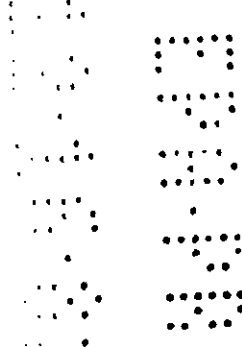
**PESTICIDE DISPOSAL**  
Pesticides, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to Federal or approved state procedures under Subtitle C of the Resource Conservation and Recovery Act.

**CONTAINER DISPOSAL**  
Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

**INSTRUCTIONS FOR FORMULATION**  
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.  
Formulators using this product are responsible for EPA registration for their formulated products. Refer to technical bulletin on FMB 4500 Quats for instructions for formulation and other information.

EPA REG. NO. 47371-12                      EPA EST. NO. 47371-01-01                      FMB  
H&S CHEMICALS DIVISION                      HUNTINGTON, IN 46786                      318/388-6189  
678 EAST Tipton

007 198



# FMB 4500 QUAT

NOT REVIEWED  
 In Accordance with FR Notice 82-2.  
 Based on Draft Labeling dated  
**OCT 27 1982**

FMB 4500 Quat series are designed for formulation of disinfectants, sanitizers, fungicides, water treatment microbicides, swimming pool algacides, mildewcides, oil field water flood and salt water disposal products. FMB 4500 Quats consist of an effective system of alkyl dimethyl benzyl ammonium chlorides. The multi-purpose quats provide you with an efficient chemical for formulation of disinfectant-sanitizers.

Our Quality Control program consists of checking each and every batch made, chemically and microbiologically to insure the customer that every batch meets our rigid specifications.

<u>Chemical Composition</u>	<u>FMB 4500-5</u>	<u>FMB 4500-8</u>	<u>FMB 4500-28</u>
EPA Registration Number	47371-16	47371-12	47371-22
Active Ingredients:			
n-Alkyl (C14 60%, C16 30%, C12 5%, C18 5%) dimethyl benzyl ammonium chloride	50%	80%	80%
ethanol	10%	12.5%	20%
Inert Ingredients:			
Water	40%	7.5%	X

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

The FMB 4500 Quats are effective against the representative gram-positive pathogen *Staphylococcus aureus*, the representative gram-negative pathogen *Salmonella choleraesuis*, and the representative hospital pathogen *Pseudomonas aeruginosa*.

FMB 4500 Quats are designed for formulation of germicides. For example, disinfectant cleaners in hospitals and nursing homes, as disinfectant cleaners for use in schools and colleges, hotels and motels, office buildings, households, medical and dental offices, veterinary clinics, dairy and poultry farms.

FMB 4500 Quats are effective in disinfecting pre-cleaned hard, non-porous surfaces in 10 minutes with a recommended use solution of 550 ppm active quat for hospital use areas and with a recommended use solution of 400 ppm active quat for general use areas.

<u>Organism</u>	<u>FMB Quat</u>	<u>No. of Positives</u>	<u>No. of Carriers Tested</u>
<i>Pseudomonas aeruginosa</i>	550 ppm	0	180
<i>Staphylococcus aureus</i>	400 ppm	0	180
<i>Salmonella choleraesuis</i>	400 ppm	0	180

HOSPITAL DISINFECTION . . . . .	550 ppm quat
GENERAL OR HOUSEHOLD DISINFECTION . . . . .	400 ppm quat
SANITIZATION. . . . .	200 ppm quat

FMB 4500 Quats are effective against Staphylococcus aureus and E. coli as a sanitizer in 550 ppm hard water as tested by the A.O.A.C. Germicidal and Detergent-Sanitizer Method at 200 ppm quat. In addition to use on food processing equipment and utensils, FMB 4500 Quats may be used on food-contact surfaces in public eating places.

FMB 4500 Quats sanitize precleaned food contact surfaces in one minute with the recommended use solution diluted in water up to 550 ppm water hardness (calculated at CaCO<sub>3</sub>) at 200 ppm active quat. FMB 4500 Quats are in compliance with 21 CFR §178.1010 (b)(9) and (c)(6).

FMB 4500 Quats are designed for formulation of sanitizer-cleaners for use in restaurants and bars, dietary areas, dairy and poultry farms, USDA meat and poultry processing plants, and food processing plants such as:

For use in plants operating under the USDA Poultry, Meat, Rabbit, Shell Egg Grading, and Egg Products inspection programs. FMB 4500 Quats are for use as a sanitizer on all surfaces not always requiring a rinse. Before using these compounds, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not required following use of these compounds on previously cleaned hard surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains which can adulterate or have deleterious effect on edible products. A potable water rinse is required following use of these compounds under conditions other than those stated above.

For use in sanitizing dishes, silverware, glasses, and other food utensils at 200 ppm active quat. FMB 4500 Quats may be used on food contact surfaces in public eating places. Do not rinse with potable water.

Food eggs that have been sanitized with FMB 4500 Quat shall be subjected to a thorough potable water rinse only if they are broken for use in the manufacture of egg products.

For use to sanitize the udders, flanks, and teats of dairy cows. Do not rinse with potable water. Use a fresh towel for each cow. Avoid contamination of sanitizing solution by dirt and soil. Do not dip towel back into sanitizing solution. When solution becomes visibly dirty, discard and provide fresh solution.

FMB 4500 Quats have been tested for ten different nitrosamines including N-nitrosodiethanolamine (NDEL). It was determined that the FMB 4500 Quats contained less than 20 parts per billion (ppb) and for the other nine nitrosamines FMB 4500 Quats contained less than 100 ppb.

Formulators using this product are responsible for EPA registration for their formulated products. For technical service and registration assistance, contact the H&S Chemicals Division at 219/356-8100. A complete registration package is available upon request.

Authorization for use of formulated products in USDA inspected meat, poultry, and food processing plants must be obtained by the formulator from USDA.

DANGER: CORROSIVE: Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling this product. Harmful or fatal if swallowed. Avoid contamination of food.

STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

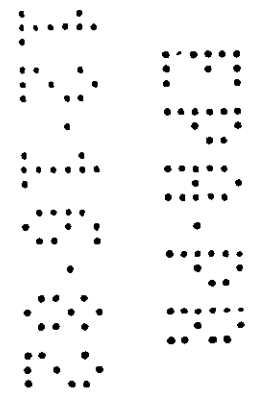
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

Consult the label for other instructions and precautionary statements before use of FMB 4500 Quats.

- FMB 4500-5 Quat      EPA Reg. No. 47371-16
- FMB 4500-8 Quat      EPA Reg. No. 47371-12
- FMB 4500-28 Quat    EPA Reg. No. 47371-22

H&S Chemicals Division  
970 East Tipton Street  
Huntington, Indiana 46750  
219/356-8100

In Accordance with EPA Regulations  
 Based on Data from EPA  
 OCT 21 1982



27 OCT 1982

**H & S Chemicals Division  
970 East Tipton St.  
Huntington, IN 46750**

**Attention: Mr. Richard Sheets**

**Gentlemen:**

**Subject: FMS 4500-S Quat Concentrated  
Germicide  
EPA Registration No. 47371-12  
Your Submission of September 14, 1982**

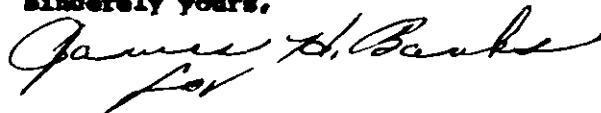
The amendment referred to above, submitted in connection with registration under FIFRA sec. 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,



**John H. Lee  
Product Manager (31)  
Disinfectants Branch  
Registration Division (TS-767C)**

**Enclosure**

# FMB 4500 QUAT

**BEST AVAILABLE COPY**

FMB 4500 Quat series are designed for formulation of disinfectants, sanitizers, fungicides, water treatment microbicides, swimming pool algacides, mildewcides, oil field water flood and salt water disposal products. FMB 4500 Quats consist of an effective system of alkyl dimethyl benzyl ammonium chlorides. The multi-purpose quats provide you with an efficient chemical for formulation of disinfectant-sanitizers.

Our Quality Control program consists of checking each and every batch made, chemically and microbiologically to insure the customer that every batch meets our rigid specifications.

<u>Chemical Composition</u>	<u>FMB 4500-5</u>	<u>FMB 4500-8</u>	<u>FMB 4500-28</u>
EPA Registration Number	47371-16	47371-12	47371-22
Active Ingredients:	<b>ACCEPTED with COMMENTS in EPA Letter Dated:</b> <b>08/27/1962</b> Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. <del>47371-12</del>		
n-Alkyl (C14 60%, C16 30%, C12 5%, C18 5%) dimethyl benzyl ammonium chloride		80%	80%
ethanol	10%	2.5%	20%
Inert Ingredients:			
Water	40%	7.5%	X

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

The FMB 4500 Quats are effective against the representative gram-positive pathogen *Staphylococcus aureus*, the representative gram-negative pathogen *Salmonella choleraesuis*, and the representative hospital pathogen *Pseudomonas aeruginosa*.

FMB 4500 Quats are designed for formulation of germicides. For example, disinfectant cleaners in hospitals and nursing homes, as disinfectant cleaners for use in schools and colleges, hotels and motels, office buildings, households, medical and dental offices, veterinary clinics, dairy and poultry farms.

FMB 4500 Quats are effective in disinfecting pre-cleaned hard, non-porous surfaces in 10 minutes with a recommended use solution of 550 ppm active quat for hospital use areas and with a recommended use solution of 400 ppm active quat for general use areas.

<u>Organism</u>	<u>FMB Quat</u>	<u>No. of Positives</u>	<u>No. of Carriers Tested</u>
<i>Pseudomonas aeruginosa</i>	550 ppm	0	180
<i>Staphylococcus aureus</i>	400 ppm	0	180
<i>Salmonella choleraesuis</i>	400 ppm	0	180

**BEST DOCUMENT AVAILABLE**



GENERAL OR HOUSEHOLD DISINFECTION . . . . .	550 ppm quat
SANITIZATION. . . . .	200 ppm quat

FMB 4500 Quats are effective against Staphylococcus aureus and E. coli as a sanitizer in 550 ppm hard water as tested by the A.O.A.C. Germicidal and Detergent-Sanitizer Method at 200 ppm quat. In addition to use on food processing equipment and utensils, FMB 4500 Quats may be used on food-contact surfaces in public eating places.

FMB 4500 Quats sanitize precleared food contact surfaces in one minute with the recommended use solution diluted in water up to 550 ppm water hardness (calculated as CaCO<sub>3</sub>) at 200 ppm active quat. FMB 4500 Quats are in compliance with 21 CFR §178.1010 (b)(9) and (c)(6).

FMB 4500 Quats are designed for formulation of sanitizer-cleaners for use in restaurants and bars, dietary areas, dairy and poultry farms, USDA meat and poultry processing plants, and food processing plants such as:

For use in plants operating under the USDA Poultry, Meat, Rabbit, Shell Egg Grading, and Egg Products inspection programs. FMB 4500 Quats are for use as a sanitizer on all surfaces not always requiring a rinse. Before using these compounds, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not required following use of these compounds on previously cleaned hard surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains which can adulterate or have deleterious effect on edible products. A potable water rinse is required following use of these compounds under conditions other than those stated above.

For use in sanitizing dishes, silverware, glasses, and other food utensils at 200 ppm active quat. FMB 4500 Quats may be used on food contact surfaces in public eating places. Do not rinse with potable water.

Food eggs that have been sanitized with FMB 4500 Quat shall be subjected to a thorough potable water rinse only if they are broken for use in the manufacture of egg products.

For use to sanitize the udders, flanks, and teats of dairy cows. Do not rinse with potable water. Use a fresh towel for each cow. Avoid contamination of sanitizing solution by dirt and soil. Do not dip towel back into sanitizing solution. When solution becomes visibly dirty, discard and provide fresh solution.

FMB 4500 Quats have been tested for ten different nitrosamines including n-nitrosodiethanolamine (NDEL). It was determined that the FMB 4500 Quats contained less than 20 parts per billion (ppb) and for the other nine nitrosamines, FMB 4500 Quats contained less than 100 ppb.

Formulators using this product are responsible for EPA registration for their formulated products. For technical service and registration assistance, contact the H&S Chemicals Division at 219/356-8100. A complete registration package is available upon request.

Authorization for use of formulated products in USDA inspected meat, poultry, and food processing plants must be obtained by the formulator from USDA.

BEST DOCUMENT AVAILABLE

DANGER: CORROSIVE: Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling this product. Harmful or fatal if swallowed. Avoid contamination of food.

STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

Consult the label for other instructions and precautionary statements before use of FMB 4500 Quats.

FMB 4500-5 Quat	EPA Reg. No. 47371-16
FMB 4500-8 Quat	EPA Reg. No. 47371-12
FMB 4500-28 Quat	EPA Reg. No. 47371-22

H&S Chemicals Division  
970 East Tipton Street  
Huntington, Indiana 46750  
219/356-8100

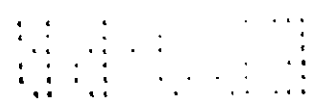
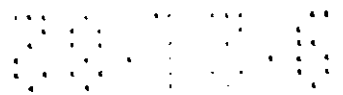
ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

OCT 27 1982

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
47371-12

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47371-12

9 of 9

# FMB 4500-8 QUAT

## FMB 4500-8 QUAT

### concentrated germicide

FOR FORMULATION OF DISINFECTANTS, SANITIZERS, FUNGICIDES, WATER TREATMENT MICROBICIDES, SWIMMING POOL ALGAEICIDES, MILDOWICIDES, OIL FIELD WATER FLOOD AND SALT WATER DISPOSAL PRODUCTS.

**ACTIVE INGREDIENTS:**  
 n-Alky (C14 60%, C15 30%, C17 5%, C18 5%) dimethyl benzyl ammonium chlorides ..... 80.0%

**INERT INGREDIENTS**  
 Total ..... 20.0%

100.0%

## DANGER: KEEP OUT OF REACH OF CHILDREN

### STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Corrosive.** Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling the concentrate. Harmful or fatal if swallowed. Avoid contamination of food.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply in marine and/or estuarine oil fields. Do not discharge into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. For guidance, contact your Regional Office of the Environmental Protection Agency.

### PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame. FMB 4500-8 is a cationic germicide. Do not mix with soap or anionic materials.

### STORAGE AND DISPOSAL

This product must be kept under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

### PESTICIDE DISPOSAL

Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to Federal or approved state procedures under Subtitle C of the Resource Conservation and Recovery Act.

### CONTAINER DISPOSAL

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

### INSTRUCTIONS FOR FORMULATION

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Formulators using this product are responsible for EPA registration for their formulated products. Refer to technical bulletin on FMB 4500 Quats for instructions for formulation and other information.

EPA REG. NO. 47371-12      EPA EST. NO. 47371-1A-01

HQS CHEMICALS DIVISION

970 EAST TIPTON      HUNTINGTON, IN 46750      219/356-8100

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

OCT 27 1982

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

47371-12

**BEST AVAILABLE COPY**

**BEST DOCUMENT AVAILABLE**

FOR FORMULATION OF DISINFECTANTS, SANITIZERS, FUNGICIDES, WATER TREATMENT  
MICROBICIDES, SWIMMING POOL ALGAEICIDES, MILKICIDES, OIL FIELD  
WATER FLOOD AND SALT WATER DISPOSAL PREVENTS.

ACTIVE INGREDIENTS:  
n Al, (Cl 14.0%, C 2.3%, Cl 25%, Cl 105%) dimethyl benzyl ammonium chlorides ..... 80.0%  
INERT INGREDIENTS  
Total ..... 20.0%  
100.0%

# DANGER: KEEP OUT OF REACH OF CHILDREN

## STATEMENT OF PRACTICAL TREATMENT

In case of contact with edibility fish, eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. If swallowed, drink plenty 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.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling the concentrate. Harmful if fatally swallowed. Avoid contamination of food.

## ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply in marine and/or estuarine fields. Do not discharge into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. For guidance, contact your Regional Office of the Environmental Protection Agency.

## PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame. FMB 4500-8 is a cationic germicide. Do not mix with soap or anionic materials.

## STORAGE AND DISPOSAL

This product must be kept under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

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## CONTAINER DISPOSAL

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

## INSTRUCTIONS FOR FORMULATION

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Formulators using the product are responsible for EPA registration for their formulated products. Refer to technical bulletin on FMB 4500-8 for instructions for formulation and other information.

EPA REG. NO. 47371-12      EPA EST. NO. 47371-1W-01      115-1  
HQS CHEMICALS DIVISION

970 EAST Tipton      HUNTINGTON, IN 46750      219/356-8100

ACCEPTED  
with COMMENTS  
In EPA Letter 10/2/62

OCT 2 8 1962

Under the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, this product is registered under EPA Reg. No. 47371-12

BEST DOCUMENT AVAILABLE



H&S Chemicals Division

# FMB 4500 QUAT

FMB 4500 Quat series are designed for formulation of disinfectants, sanitizers, fungicides, water treatment microbiocides, swimming pool algacides, mildewcides, oil field water flood and salt water disposal products. FMB 4500 Quats consist of an effective system of alkyl dimethyl benzyl ammonium chlorides. The multi-purpose quats provide you with an efficient chemical for formulation of disinfectant-sanitizers.

Our Quality Control program consists of checking each and every batch made, chemically and microbiologically to insure the customer that every batch meets our rigid specifications.

Chemical Composition	FMB 4500-5	FMB 4500-8	FMB 4500-28
EPA Registration Number	47371-16	47371-12	47371-22
Active Ingredients:	<b>ACCEPTED</b> with COMMENTS in EPA Letter dated:		
n-Alkyl (C14 60%, C16 30%, C12 5%, C18 5%) dimethyl benzyl ammonium chloride	80%	80%	80%
ethanol	10%	2.5%	20%
Inert Ingredients:			
Water	10%	7.5%	X

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

The FMB 4500 Quats are effective against the representative gram-positive pathogen *Staphylococcus aureus*, the representative gram-negative pathogen *Salmonella choleraesuis*, and the representative hospital pathogen *Pseudomonas aeruginosa*.

FMB 4500 Quats are designed for formulation of germicides. For example, disinfectant cleaners in hospitals and nursing homes, as disinfectant cleaners for use in schools and colleges, hotels and motels, office buildings, households, medical and dental offices, veterinary clinics, dairy and poultry farms.

FMB 4500 Quats are effective in disinfecting pre-cleaned hard, non-porous surfaces in 10 minutes with a recommended use solution of 500 ppm active quat for hospital use areas and with a recommended use solution of 400 ppm active quat for general use areas.

Organism	FMB Quat	No. of Positives	No. of Carriers Tested
<i>Pseudomonas aeruginosa</i>	550 ppm	0	180
<i>Staphylococcus aureus</i>	400 ppm	0	180
<i>Salmonella choleraesuis</i>	400 ppm	0	180

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HOSPITAL DISINFECTION . . . . .	550 ppm quat
GENERAL OR HOUSEHOLD DISINFECTION . . . . .	400 ppm quat
SANITIZATION. . . . .	200 ppm quat

FMB 4500 Quats are effective against *Staphylococcus aureus* and *E. coli* as a sanitizer in 550 ppm hard water as tested by the A.O.A.C. Germicidal and Detergent-Sanitizer Method at 200 ppm quat. In addition to use on food processing equipment and utensils, FMB 4500 Quats may be used on food-contact surfaces in public eating places.

FMB 4500 Quats sanitize precleaned food contact surfaces in one minute with the recommended use solution diluted in water up to 550 ppm water hardness (calculated as  $\text{CaCO}_3$ ) at 200 ppm active quat. FMB 4500 Quats are in compliance with 21 CFR §178.1010 (b)(9) and (c)(1).

FMB 4500 Quats are designed for formulation of sanitizer-cleaners for use in restaurants and bars, dietary areas, dairy and poultry farms, USDA meat and poultry processing plants, and food processing plants such as:

For use in plants operating under the USDA Poultry, Meat, Rabbit, Shell Egg Grading, and Egg Products inspection programs. FMB 4500 Quats are for use as a sanitizer on all surfaces not always requiring a rinse. Before using these compounds, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not required following use of these compounds on previously cleaned hard surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains which can adulterate or have deleterious effect on edible products. A potable water rinse is required following use of these compounds under conditions other than those stated above.

For use in sanitizing dishes, silverware, glasses, and other food utensils at 200 ppm active quat. FMB 4500 Quats may be used on food contact surfaces in public eating places. Do not rinse with potable water.

Food eggs that have been sanitized with FMB 4500 Quat shall be subjected to a thorough potable water rinse only if they are broken for use in the manufacture of egg products.

For use to sanitize the udders, flanks, and teats of dairy cows. Do not rinse with potable water. Use a fresh towel for each cow. Avoid contamination of sanitizing solution by dirt and soil. Do not dip towel back into sanitizing solution. When solution becomes visibly dirty, discard and provide fresh solution.

FMB 4500 Quats have been tested for ten different nitrosamines including n-nitrosodiethanolamine (NDELA). It was determined that the FMB 4500 Quats contained less than 20 parts per billion (ppb) and for the other nine nitrosamines, FMB 4500 Quats contained less than 100 ppb.

Formulators using this product are responsible for EPA registration for their formulated products. For technical service and registration assistance, contact the H&S Chemicals Division at 219/356-8100. A complete registration package is available upon request.

Authorization for use of formulated products on USDA inspected meat, poultry, and food processing plants must be obtained by the form available from USDA.