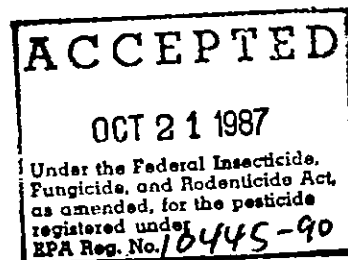


10F7
pm2/
10445-90

BIOCHEK 410



BIOCHEK 410 is an industrial preservative which effectively inhibits the growth of bacteria, fungi and yeasts in aqueous systems including paints, adhesives, latex emulsions, metalworking fluids, paper & paper mills, pigment slurries, joint cements, and household products. BIOCHEK 410 is intended to protect products during storage. BIOCHEK 410 does not impart antimicrobial properties to the preserved product.

Appearance Tan to light brown aqueous dispersion
Active Ingredients 19% 1,2-dibromo-2,4-dicyanobutane
..... 6% 1,2-benzisothiazolin-3-one
Viscosity (Brookfield RVT, #5 Spindle @ 50 rpm, 20°C) 1200-2000 cps
Freezing Point 0°C
Specific Gravity 1.1 @ 20°C

TYPICAL USE LEVELS

Laboratory testing and customer use show BIOCHEK 410 is typically effective when applied at concentrations shown below. The exact amount necessary for the preservation of any given formulation will depend on the components, storage time and temperature, etc., and can be determined by actual testing done by your Calgon representative. All concentrations are based on the total formulation weight.

Product Use Level

Adhesives	0.05 - 0.8%
Latex Emulsions	0.05 - 0.8%
Metalworking Fluids	0.05 - 0.4%
Aqueous Paints	0.05 - 0.4%
Pigment Slurries	0.05 - 0.2%
Joint Cements	0.2 - 0.8%
Household Products	0.05 - 0.4%
Pulp & Paper Mills	0.05 - 0.8%

MICROORGANISM CONTROL

BIOCHEK 410 is proven to be effective in controlling the growth a variety of bacteria, fungi and yeasts. These include:

Bacteria

Aerobacter aerogenes
Bacillus megaterium
Bacillus subtilis ATCC 27388
Desulfovibrio desulfuricans ATCC 7757
Enterobacter cloacae
Escherichia coli ATCC 4352
Klebsiella pneumonia ATCC 8308
Proteus mirabilis ATCC 7002
Proteus vulgaris
Pseudomonas aeruginosa ATCC 10145
Pseudomonas fluorescens ATCC 13525
Staphylococcus aureus ATCC 6538
Streptococcus faecalis
Streptococcus lactis

Fungi

Aspergillus niger ATCC 6275
Aureobasidium pullulans
Cephalosporium sp. (Metalworking fluid isolate)
Fusarium sp. (Metalworking fluid isolate)
Penicillium funiculosum ATCC 9644
Penicillium notatum
Trichoderma viride ATCC 9678

Yeast

Candida sp. (Metalworking fluid isolate)
Saccharomyces cerevisiae ATCC 4111

DIRECTIONS FOR USE

BIOCHEK 410 is an in-can preservative intended to protect products during storage from degradation by bacteria, fungi and yeasts. BIOCHEK 410 does not impart antimicrobial properties to the preserved product.

Adhesives:

BIOCHEK 410 should be incorporated with agitation into the make-up water. However, where the adhesive is heated, BIOCHEK 410 should be added during the cool-down cycle. Adhesives for which BIOCHEK 410 provides effective in-can preservation are: starch, epoxy, polyester, polyvinyl, acetate, styrene butadiene, methyl cellulose, acrylic, polyvinyl alcohol, hydroethyl cellulose, dextrin and casein. The ingredients in BIOCHEK 410 are approved for use in adhesives by the Food & Drug Administration under 21 CFR 175.105.

Aqueous Paints:

BIOCHEK 410 should be incorporated into the make-up water during the grind.

- 3 -

Latex Emulsions:

BIOCHEK 410 should be added using moderate agitation immediately following cool-down of the emulsion and prior to pumping into storage tank facilities. Latex emulsions that are preserved by BIOCHEK 410 include polyvinyl acetate, acrylic, vinyl acrylic and styrene butadiene. These emulsions are the raw materials used in the formulation of paints, adhesives, joint cements, pigments and household products.

Dispersed Pigments:

BIOCHEK 410 should be added using moderate agitation immediately following cool-down of the dispersed pigment and prior to pumping to the storage tank.

Household Products for Waxes, Polishes and Inks:

BIOCHEK 410 should be incorporated with agitation into the make-up water blend.

Joint Cements:

BIOCHEK 410 should be incorporated with agitation into the make-up water.

Metalworking Fluids:

BIOCHEK 410 can be added or metered into the final diluted fluid either prior to its addition to the system or after the system has been filled. BIOCHEK 410 should be thoroughly mixed into the system to assure efficacy. If BIOCHEK 410 is added to the concentrate, testing should be conducted to assure compatibility.

Paper Mill Slimicide Control:

Addition should be made at a location that will insure uniform distribution of BIOCHEK 410 in the mass of fiber and water, such as the beaters, jordan inlet or discharge, broke chests, furnish chests, save-alls, and white-water chests. It is preferable to clean a fouled machine before slimicide addition whenever possible.

The ingredients in BIOCHEK 410 are approved for use as slimicides by the Food & Drug Administration under 21 CFR 176.300, for use in paper and paperboard products that contact aqueous, fatty and dry food under 21 CFR 176.170 and 176.180.

COMPATIBILITY

BIOCHEK 410 is compatible with typical ingredients in end-use formulations. However, it should be added separately from amine-containing and strong nucleophylic agents during product formulations. Mixing BIOCHEK 410 with these agents may cause a reaction between the ingredients which can de-activate BIOCHEK 410.

BIOCHEK 410 is most active over a pH range of 2-9.5. In some formulations, product has shown efficacy in higher pH formulations. If the formulation will have a final pH greater than 9.5, laboratory testing is recommended.

CORROSION PROPERTIES

BIOCHEK 410 is compatible with materials such as PVC, polyethylene, polypropylene, Tygon, Teflon and glass. BIOCHEK 410 is corrosive to mild steel.

Positive displacement pumps are preferred for handling the product. Chemical feed pumps are available from Calgon Corporation.

PACKAGING

BIOCHEK 410 is available in 44 pound net pails, 440 pound net drums and liquabins containing 3000 pounds net.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: CORROSIVE TO EYES

CAUSES EYE DAMAGE AND SKIN IRRITATION

HARMFUL IF SWALLOWED

Do not get in eyes, on skin or clothing. Wear goggles or face shield and rubber gloves when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

STATEMENT OF PRACTICAL TREATMENT

- EYES:** If in eyes, immediately hold eyelids open and flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
- SKIN:** If on skin, wash with soap and water. Seek medical attention if irritation develops.
- INTERNAL:** If swallowed, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

STORAGE AND DISPOSAL

Keep container closed when not in use.
Do not contaminate water, food, or feed by storage or disposal.

Ship and store BIOCHEK 410 between 0°C (32°F) and 42°C (108°F). Keep from freezing. Freeze-thaw cycle may cause a temporary water separation and can be corrected by mechanical agitation.

Store away from heat. At temperatures above 42°C (108°F), the active ingredient in the aqueous dispersion may separate out. A temperature-indicator spot has been added to the drum to indicate the exposure to elevated temperatures. Instructions which appear on the label follow:

If temperature-indicator spot on drum head label is white, the product can be used directly.

-6-

STORAGE AND DISPOSAL (Cont'd)

If indicator spot on drum head label is bright blue, matching the exposed example, sample the drum. If the product is a slightly viscous, white dispersion, the product may be used. If two phases or if a clear viscous water layer is found, call your product representative.

Temperature changes may alter viscosity, but should not affect handling or performance.

Waste resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Do not reuse empty container.

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE

Seller makes not warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instruction.

Information concerning human and environmental exposure may be reviewed on the Material Safety Data Sheet and label for this product.

For additional information regarding incidents involving human and environmental exposure, call 412/777-8000 and ask for the Regulatory and Trade Affairs Department.



**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER

**CORROSIVE TO EYES
CAUSES EYE DAMAGE AND SKIN IRRITATION
HARMFUL IF SWALLOWED**

Do not get in eyes, on skin, or on clothing.
Wear goggles or face shield and rubber gloves
when handling.
Wash thoroughly with soap and water after
handling.
Remove contaminated clothing and wash before
reuse.

FIRST AID:

EYES: If in eyes, immediately hold eyelids
open and flush eyes with plenty of water for at
least 15 minutes. Get medical attention
immediately.

SKIN: If on skin, wash with soap and water.
Seek medical attention if irritation develops.

INTERNAL: If swallowed, call a physician or
Poison Control Center. Drink 1 or 2 glasses of
water and induce vomiting by touching back of
throat with finger or, if available, by
administering syrup of ipecac. Do not induce
vomiting or give anything by mouth to an
unconscious person.

ENVIRONMENTAL HAZARDS:

Do not discharge effluent containing this
product into lakes, streams, ponds, estuaries,
oceans, or public waters unless this product is
specifically identified and addressed in a NPDES
permit. Do not discharge effluent containing
this product to sewer systems without previously
notifying the sewage treatment plant authority.
For guidance, contact your State Water Board or
Regional Office of the EPA.

NOTICE: Seller expressly warrants that the pro-
duct conforms to its chemical description. There
are no warranties associated with the sale of
this product either express or implied including
but not limited to the warranties of fitness for
a particular purpose or merchantability.

BIOCHEK 410

AN INDUSTRIAL PRESERVATIVE TO INHIBIT THE GROWTH OF BACTERIA,
FUNGI AND YEASTS IN AQUEOUS PAINTS, ADHESIVES, LATEX EMULSIONS,
METALWORKING FLUIDS, PAPER AND PULP MILLS, PIGMENT SLURRIES,
JOINT CEMENTS, AND HOUSEHOLD PRODUCTS

ACTIVE INGREDIENTS:

1,2-dibromo-2,4-dichlorobenzene.....10%

1,2-bis(4-chlorophenyl)ethane.....8%

INERT INGREDIENTS.....76%

E.P.A. Registration No. 10445-

- EPA Establishment No. 10445-PA-01
- EPA Establishment No. 10445-NJ-01
- EPA Establishment No. 10445-CA-01
- EPA Establishment No. 10445-TX-01
- EPA Establishment No. 10445-MO-01
- EPA Establishment No. 45358-CT-01

**KEEP OUT OF REACH OF CHILDREN
DANGER**

See Side Panel For Additional
Precautionary Statements

NET WEIGHT _____

Information concerning human and environmental exposure may be reviewed on
the Material Safety Data Sheet for this Product.
For additional information regarding incidents involving human and environ-
mental exposure, call 412-777-8000 and ask for the Regulatory and Trade Affairs
Department.

CALQON CORPORATION
Calqon Center
Pittsburgh, PA

BEST AVAILABLE COPY

DIR

It is a violation
product in a manner

The amount necessary
varies, depending on
further application in
Bulletin.

STORA

Keep container closed.
Do not contaminate
storage or disposal.

Ship and store BIOCHEK
00-42°C (32°F to 108°F)
product may cause a fire
can be corrected by me

Store away from heat
42°C (108°F), the active
dispersion may separate
ATTENTION: If the tempera-
white, the product can
If the indicator bulb
the exposed example, s
is a slightly viscous,
may be used. If two p
viscous water is found
representative.
Temperature changes
not effect product han

DISPOSAL: Pesticide w
Improper disposal of e
or rinsate is a violat
wastes cannot be dispo
label instructions, co
Environmental Control
representative at the
guidance.

DISPOSAL OF DRUMS: Do
Triple rinse (or equiv
offer for recycling or
and dispose of in a sa
incineration or, if al
authorities, by burnin
smoke.