



TRETOLITE DIVISION

X-CIDE 505
INDUSTRIAL BACTERICIDE AND FUNGICIDE

DESCRIPTION:

X-Cide 505 is a highly effective product for use in controlling the growth of bacteria and fungi in drilling fluids, water based frac fluids, secondary and tertiary oil production systems, industrial recirculating water cooling towers, air washers, evaporative condensers, pulp mills, paper mills, cane sugar mills and beet sugar mills. X-Cide 505 is not recommended for potable water or where contamination of potable water can occur.

This pesticide is toxic to fish. Do not apply in marine and/or estuarine oil fields. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge treated effluent into lakes, streams, ponds or public waters unless in accordance with a NPDES permit. For guidance contact your Regional Office of the EPA.

TYPICAL PHYSICAL PROPERTIES:

Active Ingredients:
Sodium dimethyldithiocarbamate 15%
Nabam (Disodium ethylene bisdithiocarbamate) 15%
Inert Ingredients 70%

pH.....11.5 ± 1.0%
density.....1.15 ± 1.20%
color.....yellow green to green
transmittance.....95% minimum
odor.....hydrogen sulfide
weight per U.S. gallon.....9.8 pounds
storage.....avoid extreme heat or freezing

HANDLING:

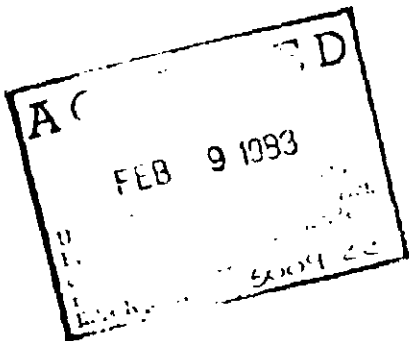
WARNING: Causes eye and skin irritation. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, rubber gloves and full protective clothing (long sleeve shirts, long pants and boots) when handling. Harmful if swallowed. Avoid contamination of food & feed stuffs.

FIRST AID:

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

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are unavailable, drink large quantities of water. Call a physician immediately.

The following is a summary of dosage and feeding recommendations for each use of X-Cide 505.





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DIRECTIONS FOR USE:

Drilling Fluids:

X-Cide 505 is used at a rate of 1 to 5 gallons per 100 bbl of mud (0.02% to 0.1%). It can be used directly from the shipping container or pre-diluted with water. It can be put in through the mud hopper or added to the pump suction.

Water Based Frac Fluids:

X-Cide 505 is used at a rate of 0.25 to 0.5 gallons per 1000 gallons of frac fluid (250 to 500 ppm). It should be added directly into the frac tank before or during the addition of water to achieve proper mixing.

Secondary and Tertiary Oil Production Systems:

X-Cide 505 can be injected directly from the shipping container. It should be thoroughly mixed into the injection fluid, fresh or salt or commingled water, used for secondary or tertiary oil recovery. It may be applied in the injection fluid immediately ahead of water deoiling equipment, clear water holding tank or at the suction side of the injection pump.

X-Cide 505 should be used full strength in concentrations of 30 ppm X-Cide 505 on a continuous basis or in slug applications up to 500 ppm X-Cide 505 ( $\frac{1}{4}$  pint per 1000 gallons of water equals approximately 30 ppm). A typical slug application of XC-505 is  $1\frac{1}{2}$  pint per 1000 gallons water (approximately 150 ppm).

Industrial Recirculating Water Cooling Towers and Evaporative Condensers:

Dosages for industrial recirculating water cooling towers or evaporative condensers will depend on the condition of the system prior to treatment initiation. Systems which are heavily contaminated should be cleaned first. Apply X-Cide 505 to the cleaned system or when growth is first noticed, according to the following schedule:

Initial Dose: Apply 13.06 ounces of product per each 1000 gallons of water in the system (120 ppm). This dose may be repeated once, twice or three times weekly or as required to control the growth of slime-forming organisms.

Subsequent Dose: When microbial control is evident, add 2.18 to 4.35 fluid ounces of X-Cide 505 per 1000 gallons of water (20-40 ppm) in the system every three days, or as needed.



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#### Air Washers:

In treating air washer systems, procedure is by introducing a suitable detergent solution into the system and allow air washer to run with fan off for two hours. Flush. Check all nozzles and manually clean those that are plugged. Add product at specified under dosages for Cooling Towers.

#### Feeding:

X-Cide 505 may be fed directly from the drum or diluted with water and fed by any suitable feed system. X-Cide 505 should be dosed directly into the sump or basin or any other location where good distribution can be assured.

#### Paper Mills:

Dosages will vary from 0.1 to 2.0 pounds (0.04 to 0.91 quarts) of X-Cide 505 per ton of finished paper, depending of the type of stock, complexity of the system, quality of the raw water, and type and degree of contamination.

#### Feeding:

X-Cide 505 may be drip fed continuously from the drum or fed by suitable chemical pumps such as adjustable proportioning types, variable speed, positive displacement type, or by the reciprocating type. This product should be fed as early as possible into the system at such points as the hydro-pulper machine chest, or broke system.

X-Cide 505 may be used to control slime on machines which can make paper and paperboard for use in food packaging. X-Cide 505 complies with Title 21 - Code of Federal Regulations, Section 121.2505 of the Food Additive Regulations and may be used under conditions specified in the regulations.

#### Beet Sugar Mills:

X-Cide 505 is applied initially at the rate of 5 ppm (based on the total volume of water in the flume system) on a continuous or once per shift basis. Thereafter, 2 ppm is added to the system per 9 hour shift. The

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concentration may be increased to 5 ppm per shift if a decrease in pH or increase in odor is detected.

To calculate the amount of X-Cide 505 to add on a once per shift basis, determine the total volume of water in the transport and washing system. Multiply this volume in millions of gallons by the factor 4.3 to determine the amount in gallons of X-Cide 505 for the initial treatment. For the subsequent treatment of 2 ppm, multiply the volume of the transport and washing system in millions of gallons by the factor 1.7. On a continuous addition basis, add these calculated volumes over the 8 hour shift. The table below lists the amounts of X-Cide 505 to use for various volumes of systems water in millions of gallons.

MILLIONS OF GALLONS IN SYSTEM	VOLUME OF X-CIDE 505	
	2 ppm	5 ppm
0.1	1-1/3 pts	3-1/2 pts
0.5	7 pts	1 gal + 1 pt
1.0	1 gal + 3 qts	4 gal + 2 pts
5.0	8 gal + 2 qts	21 gal + 2 qts

Cane Sugar Mills:

X-Cide 505 is a liquid which should be fed directly into the cane juice so that the treated juice circulates to all parts of the mill tandem. The point or points of addition will depend on mill design. Frequently, the dosage will be split between the crusher juice and juice circulated back to the crusher of the first mill. The best addition point is to the juice circulated back to the crusher of the first mill. Do not add this product to the maceration water.

X-Cide 505 should be fed continuously at the rate of 10-20 parts of product per million parts of cane ground per day. 10 ppm of product is the standard dosage. This may be raised up to a maximum of 20 ppm, if necessary. Conditions warranting some increase would be grinding of cane damaged through freezing, poor weather or delays between cutting and grinding. See feeding directions which follow.



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Proper feed of X-Cide 505 is best obtained through the use of a chemical feed pump, such as the adjustable proportioning type, the variable speed, positive displacement type or the reciprocating type. The required dosage will depend on the average daily rate of cane ground. The following chart shows the proper dosage in milliliters and ounces of X-Cide 505 to be used per minute.

SHORT TONS OF CANE GROUND PER DAY	RATE OF FEED (10 ppm)		RATE OF FEED (20 ppm)	
	ml/min	oz/min	ml/min	oz/min
1,000	5.4	0.187	10.7	0.374
2,000	10.7	0.374	21.4	0.746
3,000	16.1	0.561	32.2	1.122
4,000	21.4	0.748	42.9	1.496
5,000	26.8	0.935	53.7	1.870
6,000	32.2	1.122	64.4	2.244
7,000	37.5	1.309	75.0	2.618
8,000	42.9	1.496	85.8	2.992
9,000	48.3	1.683	96.6	3.366
10,000	53.7	1.870	107.4	3.740

Do not exceed feed rate of 4 gallons (39.2 lbs) product per 100 short tons of cane ground per 24 hours.

These dosages apply to cane sugar mills only. Do not use those dosages in beet sugar mills.

The use of X-Cide 505 does not replace good housekeeping. This should include regular cleaning, at least once per shift. Regular hosing of the mill's bagacillo conveyors and screens with hot water and steam is essential for maintaining efficient control of microbiological slime and sucrose losses.

This product complies with Title 21 - Code of Federal Regulations, Section 121.155 (Chemicals Used for the Control of Microorganisms in Cane Sugar Mills) of the Food Additive Regulations, and may be used under conditions specified in the Regulations.

12/82 DRAFT

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