

Vinyzene® BP-10

BACTERIOSTATIC & FUNGISTATIC ADDITIVE FOR VINYL COMPOUNDS

CAUTION



Keep Out of Reach of Children — Do not allow in direct contact with skin. Do not allow material to be splashed in eyes. Avoid contact with clothing. Harmful if swallowed.

If splashed on skin, wash thoroughly with soap and water. If splashed in eyes, wash eyes immediately with copious amounts of water and secure medical attention immediately. Wash after handling.

This product is toxic to fish and wildlife. Treated effluent should not be discharged where it will drain into lakes, streams, ponds or public water. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on the label.

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

Active Ingredients:

10,10'-oxybisphenoxarsine 0.5%
(Total arsenic as elemental As — 0.15%)
(Water soluble arsenic as elemental As — Less than 0.01%)

Ris (trichloromethyl) sulfone 1.0%
Inert Ingredients: 98.5%
100.0%

DIRECTIONS FOR USE

A level of 3% VINYZENE BP-10, based on total weight of formulation, will give excellent control against bacteria and mold organisms. This level is recommended for shower curtains, wall coverings, mattress covers, windbreakers and similar items. VINYZENE BP-10 may be used at a level of 3 percent in vinyl films to be employed in the manufacture of baby pants. EPA has specified that the plasticizers used in baby pants films be FDA approved. Add to vinyl formulation in place of an equivalent amount of plasticizer.

For certain vinyl items which may be subjected to extended outdoor weathering, a level of 5% VINYZENE BP-10 should be evaluated. Such items would include vinyl tarpaulins prepared by military and naval agencies for protection of items subjected to extended outdoor storage.

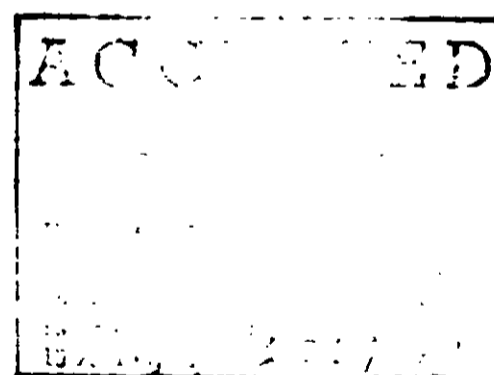
NOTICE TO USER

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

READ THIS LABEL BEFORE USING

U.S. Patent No. 3,689,449

Licensed for use under U.S. Patent No. 3,069,252



EPA REGISTRATION NO. 2829-02

EPA EST. REG. NO. 2829-IL-1

Seller makes no 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 instructions.

Windsor Corporation
Chemical Division
Windsor, Massachusetts 01981

FOR INDUSTRIAL USE ONLY

VINYZENE BP-10

VINYZENE BP-10 is a widely compatible, especially designed epoxidized soybean plasticizer for polyvinyl chloride systems with highly effective built-in bacteriostatic and fungistatic properties.

VINYZENE BP-10 has outstanding properties characteristic of high oxirane epoxidized systems resulting in the following performance characteristics:

- 1) Excellent compatibility and performance as an anti-spewing primary plasticizer.
- 2) Excellent heat and light stabilizing properties.
- 3) Exceptional permanence properties.
- 4) Highly effective fungistatic and bacteriostatic properties sufficient to meet virtually all military and commercial performance specifications such as --

Ford Motor Company - Material Specification ESB-M4D284-A
Material Specification MF-MH-BN12-3

Military Specifications - CCC=W-409, L-P-375b and L-S-139a

VINYZENE BP-10 may be used in the manufacture of any flexible polyvinyl chloride polymer or copolymer system, including floor tiles, wall-coverings, vinyl upholstery systems, extruded stock, sheeting, etc. Its low odor and low color permit its use where other polymeric plasticizers fail.

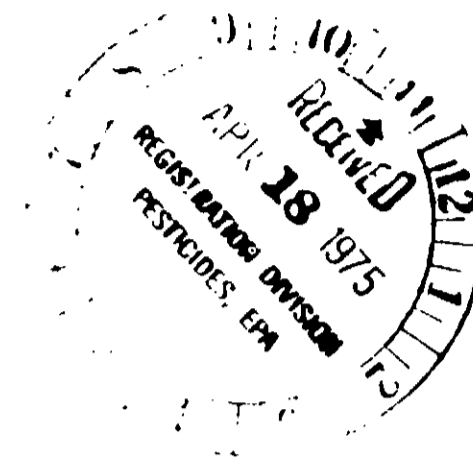
VINYZENE BP-10 because of its excellent anti-spewing can be used where other epoxidized plasticizers are avoided.

VINYZENE BP-10 is particularly outstanding in its broad-spectrum bacteriostatic and fungistatic effects. Vinyl formulations containing 3% and 5% of this product, based on the total weight of the finished film, produce large zones of inhibition against both bacteria and fungi. (See Table 1)

VINYZENE BP-10 is not only excellent in compatibility to conventional plasticizer systems, but demonstrates outstanding properties in weatherometer exposure and high temperature exposure. For example, after exposure of 8-mil clear film to 375° F. for 60 minutes, only slight discoloration was observed

A typical formulation is as follows:

- 50.0 parts Geon 121 (B. F. Goodrich Chemical Co.)
- 45.0 parts Dioctyl phthalate
- 3.0 parts VINYZENE BP-10
- 1.5 parts Mark KCB (Argus Chemical Co.)



VENTRON

T A B L E I

Bacteriostatic and Fungistatic Action on 8-mil Clear Film

Compound & Concentration in Formulation	mm. Zone of Inhibition.									
	S.aureus			E. coli			Mixed fungal spores			
	As is	L	W	As is	L	W	As is	L	W	
10,10'-oxybisphenoxarsine 0.025%										
hexachlorodimethylsulfone 0.05%	9	7	5	3	1	.5	11	9	10	

As is

L = Leached 24 hours

W = Weathered 100 hours in Xenon Weatherometer

Rectangular test panels indicated as as is, L and W were cut from the vinyl film. Group L was subjected to leaching with water for 24 hours. Group W was subjected to weathering for 100 hours. Groups As is, L and W were subjected to the following test to establish fungistatic activity.

Test panels were placed on nutrient agar surfaces in petri dishes, each agar surface having been previously inoculated with a selected microorganism. The petri dishes were covered and incubated for a period of 5 days for fungi at a temperature of 30° C. and for 34 hours at a temperature of 37° C. for bacteria. At the end of this period the clear zone indicating inhibition of growth extending outwardly from the test panels was measured. The results are given above in Table I.

RECOMMENDED LEVELS OF USE:

A level of 3% VINYZENE® BP-10, based on total weight of plastisol, will give excellent control against bacteria and mold organisms. (See typical formulation above.) This level is recommended for shower curtains, wall coverings and similar items. VINYZENE BP-10 may be used at a level of 3.0% in vinyl films to be employed in the manufacture of baby pants. EPA has specified that the plasticizer used in baby pants film be FDA allowed.

For certain vinyl items which may be subjected to extended outdoor weathering, a level of 5% VINYZENE BP-10 should be evaluated. Such items would include vinyl tarpaulins procured by military and naval agencies for protection of items subjected to extended outdoor storage.

It should be noted that VINYZENE BP-10 can be substituted directly for the equivalent amount of epoxy plasticizer normally used. Thus the cost of using VINYZENE BP-10 can be calculated as the difference in cost between the VINYZENE BP-10 and the replaced plasticizer.

EFFECT ON LIGHT AND HEAT STABILITY:

VINYZENE BP-10 has been tested in a number of vinyl formulations and has been found not to harm in any way the heat or light stability of the compound. On the other hand, it is reported that VINYZENE BP-10 in many formulations actually permits a decrease in the level of stabilizers. It is recommended that a reduction in the level of stabilizers be evaluated, since this can be an important cost savings if applicable.

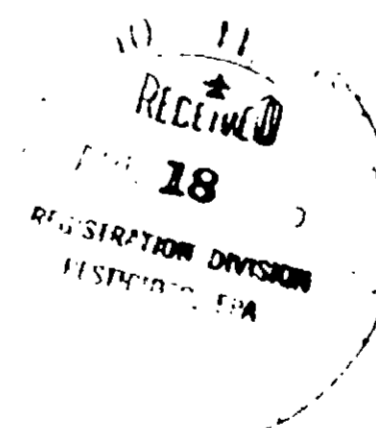
TOXICOLOGY:

It is like any highly concentrated compound and should be handled with care by plant workers. If splashed on bare skin the material should immediately be washed off with soap and water. Due care should be exercised that the material is not splashed in eyes and immediate washing of eyes should take place if this occurs.

It is recommended that VINYZENE BP-10 not be used on items coming into direct contact with food.

PHYSICAL PROPERTIES:

Active principles:	10,10'-oxybisphenoxarsine and Bis(trichloromethyl)sulfone
Solid content:	100%
Flash point (COC):	600°F.
Specific gravity:	0.997 at 20/20°C.
Iodine number:	Low
Hydroxyl content:	Very low
Polyether content:	Very low
Molecular weight:	Approximately 1000



Manufacturers using VINYZENE BP-10 in plastic products may not make claims and representations, expressed or implied, that public health benefits will accrue to the ultimate consumer.

STANDARD PACKAGE: 450 pound (net) steel drum

EPA Registration No. 2829-93

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