

VINYZENE™ SB-1

Antimicrobial Additive for Plastics

Description

VINYZENE SB-1 is a concentrate of 10,10'-oxybisphenoxarsine (OBPA) in a polymeric resin carrier supplied as a homogeneous solid in pelletised form. It is recommended for PVC and other polymeric compositions requiring preservation against fungal and bacterial deterioration.

Typical Properties

These properties are typical but do not constitute specifications.

Active Ingredient	OBPA at 5%
Resin Carrier	PVC/PVA at 95%
Pellet Size	Approx. 1.5 x 1.5 mm
Bulk Density (ASTM-D 1895)	375 kg/m ³
Appearance	Clear, Light Straw Pellet
Torque Rheometre Viscosity (Rheocord)	590 metre-grammes
Glass Transition Temp.	70°C (150°F)
Melting Point (ASTM D3418)	72°C (161°F)

Application

The most commonly used methods for preserving plastics against fungal and bacterial attack are to add liquid solutions of additives (such as the VINYZENE BP-505 series) or to add pure active ingredient in powdered form. Such highly concentrated powders must be handled with extreme caution; they can present hazards due to dusting problems and can cause contamination of processing equipment.

Liquid systems have eliminated the dusting problem, but care still has to be taken to minimize contact with skin and eyes.

The pelletised form of VINYZENE SB-1 not only eliminates dusting problems but reduces the need for special handling.

VINYZENE SB-1 is compatible with most thermoplastic resins and will not discolour or detract from the product's chemical or physical properties. It can be incorporated into the resin compound at any convenient stage of the manufacturing process.

The product can be fed into an extrusion operation in much the same way as pelletised colour concentrates. Since VINYZENE SB-1 is soluble in most common coating and printing ink solvents, it can be added directly to the vehicle during manufacture. OBPA is resistant to leaching and is non-volatile at normal coating and plastic processing and use temperatures.

Recommended Use Levels

Effective preservation against the growth of bacteria and fungi can be obtained with low levels of VINYZENE SB-1. Addition levels depend on the fungal and bacterial susceptibility of the product, the amount of preservation required, the end use of the product and the degree of exposure to outdoor weathering or other conditions favourable for fungal and bacterial growth.

The following recommended use levels are based upon tests conducted in Rohm and Haas laboratories and experience with exposure of products to actual service conditions.

Interior Applications - such as PVC floor and wall coverings, coated fabrics, interior automotive parts, refrigerator gaskets, shower curtains - *use 0.6% of VINYZENE SB-1 based upon the total weight of the formulation (6 kg/1000 kg of compound).*

Exterior Applications - such as automotive landau tops, exterior automotive trim, tarpaulins, awnings, ditch and pool liners, marine upholstery, - *use 1.0% of VINYZENE SB-1 based upon the total weight of formulation (10 kg/1000 kg of compound).*

Fungal and bacterial activity under severe outdoor exposure is influenced by the overall weatherability of the plastic system. Fungal and bacterial susceptibility testing and assistance in developing formulations to meet your specific requirements are available from Rohm and Haas Plastics Additives.

Handling and Storage

Handling - Avoid contact with skin. Wash after handling. Do not contaminate water by cleaning of equipment or disposal of waste.

Storage - Do not store this material near food or drinking water. Keep container tightly closed when not in use.

At high concentrations biocides are dangerous if released in the environment. Consequently any release should be avoided. In case of accidental spill take all necessary actions to recover the product and dispose of according to local regulations.

Please read and apply recommendations written in the corresponding Safety Data Sheet applicable in your country.

Standard Package

25 kg net fibre drum.

Disposal of Packaging - Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

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