MICROPEL® 5PVC

Antimicrobial for plastics

Description

Micropel® 5PVC is an antimicrobial concentrate of the active ingredient 10,10'-Oxybisphenoxarsine. Micropel 5PVC provides effective control of a wide range of fungal and bacterial organisms thereby preventing degradation of the product.

Plastics generally are considered to be resistant to microorganisms, but there are components in polymer formulations that are responsible for fungal attack. The use of antimicrobials is a preventative measure to protect the overall end-material from growth of microorganisms; plasticized PVC, polyurethanes and other polymeric compositions are particularly susceptible. Failure to incorporate sufficient antimicrobial additive can lead to product failure such as embrittlement, cracking and weight loss. Additional adverse aesthetic problems such as musty odor and permanent staining due to microbial surface growth can lead to customer complaints. Micropel 5PVC antimicrobial is effective against microbes responsible for degrading polymeric materials and as a result extends the useful life of plastic articles.

Application & Use

Micropel 5PVC is recommended for flexible polyvinyl chloride membranes, films, sheets, extruded profiles, molded goods, laminated fabrics, and similar polymeric systems. Micropel 5PVC is compatible with most polymer formulations and will not detract from the product's chemical or physical properties. Micropel 5PVC can be conveniently incorporated in to the formulation during the mixing or compounding processes.

Micropel 5PVC should not be used for food or drinking water contact applications.

Product Highlights

- Wide spectrum antimicrobial coverage
- Phthalate-free
- Dust-free form
- Low cost to treat
- Compatible in clear applications
- Thermally stable
- UV stable
- Free-flowing pellets

Physical Properties

The following are typical properties of Micropel 5PVC; they are not to be considered product specifications.

Appearance:	White to tan pellets
Active Ingredient(s):	5% 10,10'-Oxybisphenoxarsine
Resin Carrier	Polyvinyl chloride
Pellet Size	1.5 to 2 mm

Antimicrobial Activity

Micropel® 5PVC has a broad spectrum of efficacy against a wide range of microorganisms; following are some examples:

Micro-organisms	MIC*
Alternaria alternata	10
Aspergillus niger	10
Trichoderma virens	10
Aureobasidium pullulans	10
Chaetomium globosum	10
Cladosporium cladosporoides	10
Sclerophoma pityphila	10
Penicillium glaucum	10
Pseudomonas aeruginosa	10
Staphylococcus aureus	10

*Minimum inhibition concentrations (MIC in mg a.i./l) of 10,10'-Oxybisphenoxarsine (source: Biocides in Plastics).

Function/Activity

Suggested application levels are based on laboratory evaluations, and are typical for the use areas indicated. Suggested treatment levels are reported as percentage weight/weight based on the final end-use product.

	% Wt/Wt
Typical PVC Formulations	0.6 - 1.0

Due to various possibilities of application and different methods of processing, it is advised to check compatibility in the development of new products. Contact your Troy representative for assistance.

Formulation Considerations

Calendered film: For flexible PVC, Micropel 5PVC can be added to the banbury mixer or pre-blender to ensure even distribution to the entire plasticized material.

Compounds: For addition in melt processed polymers (flexible PVC, TPE, TPU, etc), Micropel 5PVC can be added during pre-blending to achieve a homogeneous fused mass prior to feeding through the extruder.

Coated fabric: Micropel 5PVC can be dissolved in a solvent and incorporated in to plastisol. Mix thoroughly to ensure homogeneous incorporation of the biocide

Laminated fabric: Micropel 5PVC can be extruded in to a film and subsequently laminated to fabric

Shelf-Life is 2 years from the date of manufacture.

Shipping & Packaging

Micropel® 5PVC is packaged in:

Shipping Container	Net Weight
Drum	158 Kg
Box	25 Kg

Product Safety Information

For health and safety data and handling, storage and disposal procedures, please refer to the Safety Data Sheet (SDS) and product label.