



MICROPEL® 5DIDP

Antimicrobial for plastics

Description

Micropel® 5DIDP is an antimicrobial liquid solution based on the active ingredient 10,10'-Oxybisphenoxarsine in a nonvolatile plasticizer carrier. Micropel 5DIDP 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 5DIDP antimicrobial is effective against microbes responsible for degrading polymeric materials and as a result extends the useful life of plastic articles.

Application & Use

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

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

Product Highlights

- Wide spectrum antimicrobial coverage
- Non-volatile plasticizer carrier
- Low treatment levels
- Compatible in clear applications
- Thermally stable
- UV stable

Physical Properties

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

Appearance: Clear amber liquid
Active Ingredient(s): 5% 10,10'-Oxybisphenoxarsine
Inert Carrier: Diisodecyl phthalate
Specific Gravity: 1.02

Antimicrobial Activity

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

Micro-organisms	MIC*
<i>Alternaria alternate</i>	10
<i>Aspergillus niger</i>	10
<i>Trichoderma virens</i>	10
<i>Aureobasidium pullulans</i>	10
<i>Chaetomium globosum</i>	10
<i>Cladosporium cladosporoides</i>	10
<i>Sclerophoma pityphila</i>	10
<i>Penicillium glaucum</i>	10
<i>Pseudomonas aeruginosa</i>	10
<i>Staphylococcus aureus</i>	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
Polyurethane Foam 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

Calendared film: For flexible PVC, Micropel 5DIDP can be added to the liquid or plasticizer portion of the formulation, with thorough mixing to ensure even distribution of the antimicrobial to the entire plasticized material.

Coated fabric: Micropel 5DIDP can be incorporated in to the plastisol directly and mixed thoroughly to ensure homogeneous incorporation of the biocide.

Polyurethane foam: Micropel 5DIDP can be incorporated to the polyol directly.

Silicone sealants & caulks: can be added to the uncured sealing compound

Shelf-Life is 3 years from the date of manufacture.

Shipping & Packaging

Micropel® 5DIDP is packaged in:

Shipping Container	Net Weight
Drum	195 Kg
Tote	975 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.

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