MICROBAN ADDITIVE LB 3

For Direct Incorporation into Plastic, Rubber, Construction Materials, and Coatings for Further Processing and Preservation of Metal Working Fluids Used in Enclosed Systems

Active Ingredient:
N-Butyl-1,2-benzisothiazolin-3-one 99.2%

Inert Ingredients: 0.8%

Total ingredients: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER
See Additional Precautionary Statements on Side Panel

Distributed by:
Microban Products Company
11400 Vanstory Drive
Huntersville, NC 28078
(704) 875-0806
Made in U.K.

EPA Reg. No. 1258-1249-42162
EPA Est. No. 42182-NC-6

Net Contents: Marked on Container

Lot Number:

ENVIRONMENTAL HAZARDS: This product is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of wastes.

DIRECTIONS FOR USE:
IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Plastics. Many plastics are considered to be resistant to microbial attack, but there are significant exceptions that merit preventative action by the user of antimicrobial additive. Plastized PVC, polyurethane and silicons are particularly susceptible. The biodeterioration of products based on these types of plastics can be a serious problem for manufacturers. Failure to add the proper amount of antimicrobial additive can lead to premature product failure due to loss of mechanical strength, flexibility or adhesive strength. Also, adverse aesthetic problems such as musty odor, permanent staining or microbial surface growth can lead to customer complaints. Microban Additive LB 3 is effective against the microorganisms which degrade plastics (and other additives) or natural rubber and can increase the useful life of articles made from these materials. Microban Additive LB 3 is effective in most plastic compositions and can be used to preserve natural rubber and such plastics as PVC, polyurethane, silicone, acrylcs, and others to produce articles such as: coated fabric (e.g. oil wear, raincoats, tents, seat covers), floor coverings, underlay mats, vinyl wall coverings, tapasurfs and awnings, roof membranes, synthetic leather (e.g. sneakers and training shoe uppers), swimming pool liners, ornamental pond liners, appliance gaskets (e.g. washers, refrigerators), shoe soles, mid-soles and outers, sealants, sealers, coatings, caulks, weather stripping and non-food contact adhesives, pet toys and general household items (floor coverings, bath mats, sink drain mats, rubber or plastic coated wire shelving and dish drainers), auto parts (e.g. landing tops, door seals, shock absorbers), foam (e.g. seat cushions, gaskets, insulations), tubing (e.g. marine hose and sleeving), electrical and pipe wrap, furniture (e.g. outdoor, leisure, water bed linens, cushions, covered foam mattress padding, covered foam pillow cushions). Do not use this product to treat food/food or drinking water contact items or toys. Microban Additive LB 3 has been found to be an effective polymer preservative at concentrations of 0.03% to 1% based on the total weight of the substrates. Typical range of concentrations on which trials can be based are:

APPLIATION % Microban Additive LB 3 (based on total weight of final product)
Plastized PVC 0.25 to 0.5%
PVC 0.05 to 0.5%
Polystyrene 0.05 to 1%
Polyurethane 0.05 to 1%
Silicone 0.05 to 1%
Polyvinyl Chloride 0.05 to 0.5%
Polyethylene 0.05 to 1%
Polyacrylate 0.05 to 1%
Acrylic 0.05 to 1%
Natural latex rubber 0.03 to 0.5%
Acrylate esters such as butadiene-styrene, styrene-isoprene and acrylonitrile-butadiene-styrene 0.03 to 1%

The concentration required to give protection depends on several factors. These include the susceptibility of the system to microbiological degradation, the extent to which microorganisms can gain access, the species involved, pH, temperature, moisture and length of time for which protection is required.

The choice is dependent on the product type and expected use. These include:

Cross Linked Polyurethane: For addition to cross linked polyurethane Microban Additive LB 3 should be added to the polyol at a concentration that will yield the desired use level in the final product after reaction with the isocyanate component. Microban Additive LB 3 may also be incorporated at an injection port of a reaction injection molding (RIM) machine.

Co-Polymerized Polymers: For addition to melt processed polymers (PVC, thermoplastic polyurethane, synthetic esterprene and thermoplastic acrylics) Microban Additive LB 3 may be incorporated into the melt to yield the desired end use concentration. For example at the injection point in an extrusion system. Alternatively, Microban Additive LB 3 may be made into a concentrated chip (as above at up to 20% this product) and these chips blended with non preserved ingredients in the users plant to yield the desired use concentration and subsequent melt processing. For thermoplastic polyurethane, concentrated granules may be also be produced by incorporating Microban Additive LB 3 to granules through shear mixing (up to 20% Microban Additive LB 3). These can be blended with non preserved polymer chips in the users plant to the desired use concentration and then further heat processed (i.e. extrusion). Polymer. Microban Additive LB 3 may be added to the mixed liquid components added to a blend of PVC resin and solids, sheared mixed until a dry blend is achieved and then processed through extrusion, calendering, molding or other system.

Acrylics: In addition to the above, Microban Additive LB 3 can be added to the liquid monomers before polymerization, at levels to yield the desired use level in the final product after polymerization.

Silicone: For silicon sealants, Microban Additive LB 3 may be added to the silicone oil before processing, or to the manufacturing vessel before packing off.

Natural Rubber: Microban Additive LB 3 can be added to the latex.

The Microban Technical Service Group can provide additional guidance on the proper use of Microban Additive LB 3.