

POLYPHASE® P100

Dry-Film Preservative

Paints & Coatings
& Material Protection/US

EPA Registration No.: 5383-50

Polyphase® P100 is a pure active powdered preservative which is effective against a wide variety of fungal organisms.

Application & Use

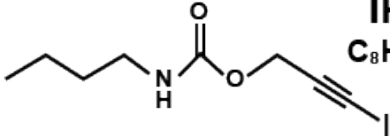
Polyphase® P100 can be used to protect both paints and stains from the growth of fungal organisms on the film surface, as well as a fungicide for cutting oils, textiles, paper coatings, inks, plastics, adhesives, canvas, and cordage. Polyphase® P100 is also used for wood preservation and wood protection in above ground applications.

This product is suitable for systems with a pH of <9 and at a temperature up to <60°C.

Product Highlights

- Highly pure fungicidal active
- Full-spectrum protection
- Globally accepted active ingredient

Active Substance

98.0%	3-Iodo-2-propynyl butyl carbamate	IPBC	 <p>IPBC $C_8H_{12}INO_2$</p>
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Physical Properties

The following are typical properties of Polyphase® P100; they are not to be considered product specifications.

Appearance:	Off-white crystalline powder
Specific Gravity, 25°C:	1.51 - 1.57
Solubility	Soluble in most aromatic solvents and alcohols
Moisture	1.0 - 1.5%
Melting Point, °C	68

Function/Activity

The following suggested use levels are based on laboratory tests and are typical for the applications indicated. The actual level required for your system is formulation specific. The selection of the individual components of the formulation, the substrate to be coated, and the environment in which the coating will be exposed all have an influence on the amount of protection needed. Suggested use levels are reported as percentage of the end-use product.

Cutting Oils

Polyphase® P100 can be used in metalworking fluids to prevent fungal growth at concentrations of 0.03-0.30%. It should be added to the cutting fluid concentrate in amounts sufficient to yield the desired concentration of active ingredient in the diluted composition. It is suggested that biocide level be checked periodically as many cutting oils are unstable upon standing.

Wood

Polyphase® P100 can be applied in solvent solutions or aqueous dispersions to new lumber, plywood, particle board, millwork, etc., to prevent the growth of fungi and sapstain. Polyphase® P100 is suggested for use on wood in above-ground use only.

Treating solutions can be prepared by dissolving Polyphase® P100 in organic solvents or by creating a water emulsion. Levels of 0.3-0.5% are suggested depending on the type of protection required, conditions for end use, and the duration of protection required. All products should be field tested in order to insure that the most cost-effective level of Polyphase® P100 is being used. Do not use on wood that comes in contact with food.

Sapstain Control

For the prevention of stain and fungi growth on freshly sawn lumber, a concentration of 0.3% is suggested as a starting level. Formulations will usually be based on aqueous dispersions and emulsions. Lumber should be dipped for a duration of one to three minutes in order to achieve the maximum penetration into wood. For best results, lumber should be treated within 24 hours after it is sawed.

Inks

Polyphase® P100 can be used in aqueous based ink solutions for antifungal protection. Polyphase® P100 will generally impart protection when used at levels of 0.05-0.50% based on the total formula weight.

Millwork

Polyphase® P100 is suggested for use on millwork, including door and window frames, exterior siding, and other construction lumber when it is important to prevent the growth of fungi on these materials. Wood treated with Polyphase® P100 does not change in appearance and can be coated when dry. For applications of this type, Polyphase® P100 can be applied from either organic solvent- or water-based formulations. These formulations can be applied by either dipping, spraying, or brushing. Suggested use level of Polyphase® P100 is 0.3-0.5% depending upon the type of protection desired. Polyphase® P100 is not suggested for wood surfaces which come into continuous skin contact.

Textiles

Polyphase® P100 can be used as a fungicide in both aqueous and solvent-based coatings or dyes which are applied to the textile material. Typical end use of these materials is in carpets, canvas and cordage, drapes, and shower curtains. Polyphase P100 should not be dissolved in the polar and vehicle portion of these coatings. Polyphase® P100 will normally impart protection to the substrate when added at levels of 0.05-0.5% based on the total formula weight. This product is not for use in fabrics for human wear.

Paper

Polyphase® P100 can be used as a fungicide in both aqueous and solvent-based formulations to treat paper, such as for soap wrappers. Polyphase® P100 should be added to the polar and vehicle components of the treatment formulation. Polyphase® P100 will generally impart protection to the substrate when added at a level of 0.025-0.050% based on the total weight of the paper.

Adhesives

Polyphase® P100 can be used as an additive to adhesive formulations to prevent the growth of fungal organisms in the material in both the wet stage and dry film. Suggested levels are 0.025-0.500% based on the formula weight. Polyphase® P100 should be added to the polar and vehicle components of the formulation.

Function	% Wt/Wt
Paints & Stains	0.30 - 0.50%
Plastics	0.05 - 0.60%
Cutting Oils	0.03 - 0.30%
Wood	0.30 - 0.50%
Textiles	0.05 - 0.50%
Paper Coatings	0.03 - 0.05%
Canvas & Cordage	0.05 - 0.50%
Adhesives, Caulks & Grouts	0.03 - 0.50%
Inks	0.05 - 0.50%

Formulating Considerations

Polyphase® P100 is typically added to formulations at the beginning of the manufacturing process. Degradation of the active ingredient in this formulation can cause yellowing in certain formulations.

All suggested use applications should be evaluated for final product efficacy, color uniformity, and for pH, temperature, and storage stability.

White and light colored exterior coatings should be checked for color stability on exposure. If yellowing occurs during the drying cycle, it is generally transitory in nature.

Do not store formulated products for prolonged periods in unlined iron or steel containers, as the degradation of the active ingredient is corrosive.

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 Arxada representative for assistance.

Shelf-life is 24 months from date of manufacture.

Packaging

Polyphase® P100 is packaged in:

Package Type	Net Weight
Box	55 lbs / 24.9 kg
Large Drum	100 lbs / 45 kg

Product Safety & Additional Information

For handling, storage, health, and safety information and disposal procedures, as well as additional information, please refer to the Safety Data Sheet (SDS) and label.



For more information visit:
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