

POLYPHASE® PW40

Dry-Film Preservative

**Paints & Coatings
& Material Protection/US**

EPA Registration No.: 5383-205

Polyphase® PW40 is a highly concentrated zero-VOC, water-based dispersion that is effective against a wide variety of fungal organisms.

Application & Use

Polyphase® PW40 offers excellent fungicidal protection of exterior paints or pigmented water-based decorative wood coatings. Further, the product is useful to prevent fungal growth on interior paints and stains (e.g., in wet rooms such as bathrooms and kitchens). Polyphase® PW40 also provides excellent control of fungal growth on adhesives, textiles, and other industrial applications and can also be used as an in-can fungicide. Due to various possibilities of application and different methods of processing, it is advised to check compatibility in the development of new products.

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

Product Highlights

- Effective against a broad range of fungi at recommended use levels
- Globally accepted active ingredient
- Suitable for white or tinted systems
- Zero VOC

Active Substance

40.0%	3-Iodo-2-propynyl butyl carbamate	IPBC	 <p>IPBC C₈H₁₂INO₂</p>
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Physical Properties

The following are typical properties of Polyphase® PW40; they are not to be considered product specifications.

Appearance:	White to white-brownish, flowable dispersion
Specific Gravity, 25°C:	1.29 - 1.35
pH (as is)	5 - 9
Specific Gravity, 20°C	1.2
Viscosity, 20°C	850

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.

Paints and Coatings

Polyphase® PW40 has been shown to be an excellent control agent against a variety of fungal species in water-based paints and coatings. In hot, humid areas where fungi are a particularly severe problem, the upper application levels are suggested. Polyphase® PW40 should be added with good agitation at the end of the manufacturing cycle.

Wood Protective Stains (Water-Based)

Polyphase® PW40 offers broad-spectrum protection against the discoloration of the protective film due to sapstain or other fungi. Polyphase® PW40 does not change the appearance of wood or have any influence on its coatability. Polyphase® PW40 is recommended only for pigmented wood stains with solid content of at least 12%. For clear and semi-transparent stains, performance testing should be conducted to ensure that Polyphase® PW40 does not affect the transparency of the final coating.

Adhesives

Polyphase® PW40 can be used as an additive to prevent the growth of fungal organisms in both the wet and cured stages of adhesives. As with other applications, Polyphase® PW40 should be added toward the end of the production cycle with good agitation.

Paper Coatings

Polyphase® PW40 can be used as a mildewcide in aqueous based paper coatings which are applied® to paper products (non-food). Polyphase® PW40 should be added toward the end of the production cycle with good agitation.

Function	% Wt/Wt
Paints & Stains	0.40 - 1.20%
Plastics	0.50 - 2.50%
Wood	0.50 - 2.00%
Textiles	0.10 - 1.00%
Paper Coatings	0.05 - 0.75%
Canvas & Cordage	0.50 - 2.00%
Adhesives, Caulks, Grouts & Sealants	0.05 - 0.20%
Inks	0.05 - 3.00%
Dispersed Pigments	0.23 - 2.10%

Formulating Considerations

Polyphase® PW40 should be added with good agitation at the end of the manufacturing cycle after pH adjustments have been made (not during the grind). Polyphase® PW40 is compatible with most known aqueous systems. Under severe conditions in exterior applications and at higher use levels than recommended, temporary discoloration can occur. Due to various possibilities of application and different methods of processing, it is advised to check compatibility in the development of new products.

Polyphase® PW40 is best added to formulations late in the manufacturing process and with good agitation. Polyphase® PW40 performs best at pH values below 9, at temperatures below 60°C, and in the absence of strong reducing or oxidizing agents. 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 12 months from date of manufacture.

Packaging

Polyphase® PW40 is packaged in:

Package Type	Net Weight
Pail	44 lbs / 19.9 kg
Large Drum	550 lbs / 249.5 kg
Tote	2800 lbs / 1270 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:
www.arxada.com

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