

POLYPHASE® AF1

Dry-Film Preservative

Paints & Coatings
& Material Protection/US

EPA Registration No.: 5383-63

Polyphase® AF1 is a fungicide solution for use in aqueous and solvent systems. It is effective against a wide variety of fungal organisms and can be used to protect both interior and exterior products from fungal growth.

Application & Use

Polyphase® AF1 is recommended to protect both interior and exterior products from the growth of fungal organisms on the end-use product such as paints, coatings, and wood protective stains, and wood preservatives. It can also be used as a fungicide in cutting oils, paper coatings, inks, adhesives, canvas, and cordage.

Product Highlights

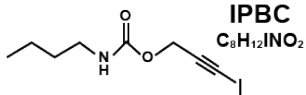
- Effective against a broad range of fungi
- Water- & solvent-based system compatibility
- Globally approved active ingredient
- Chemically stabilized formulation

Physical Properties

The following are typical properties of Polyphase® AF1; they are not to be considered product specifications.

Appearance:	Amber liquid
Specific Gravity, 25°C:	1.15
Solubility	Soluble in aromatics and alcohols
Color (Gardner)	<9

Active Substance

40.0%	3-Iodo-2-propynyl butyl carbamate	 <p>IPBC C₈H₁₂INO₂</p>
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Formulating Considerations

Do not apply Polyphase® AF1 on surfaces which come into direct contact with food. Polyphase® AF1 can be added to formulations at any stage of the manufacturing process. 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. For formulations containing driers, raw oils, and/or transition metal pigments, Arxada recommends use of Polyphase® 641 in lieu of Polyphase® AF1. 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.

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 Stains

Polyphase® AF1 has been shown to be an excellent control agent against a broad range of fungi. In hot, humid areas where mold and mildew are a particularly severe problem, higher application levels are suggested.

Cutting Oils

Polyphase® AF1 can be used in metalworking fluids to prevent fungal growth. Check biocide levels periodically as many cutting oils are unstable.

Wood

Polyphase® AF1 can be applied in solvent solutions or aqueous dispersions to new lumber, plywood, particleboard, millwork, etc., to prevent the growth of mildew, sapstain, and other fungi. It is recommended for above ground use only. Treating solutions can be prepared by diluting Polyphase® AF1 in organic solvents or by creating a water emulsion

Sapstain Control

Use Polyphase® AF1 for the prevention of the growth of sapstain and other fungi on freshly sawn lumber. 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. Lumber should be treated within 24 hours after it is sawed.

Millwork

Polyphase® AF1 is also suggested for use on millwork. to prevent the growth of mildew, sapstain, and other fungi. Wood treated with Polyphase AF1 does not change in appearance and can be painted when dry. These formulations can be applied by either dipping, spraying, or brushing.

Paper Coatings

Polyphase® AF1 can be used as a fungicide in both aqueous and solvent-based coatings applied to paper,. Polyphase® AF1 should be added at the end of the manufacturing cycle of these coatings with good agitation.

Adhesives

Polyphase® AF1 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 once the film has dried. Polyphase® AF1 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%
Cutting Oils	0.05 - 0.50%
Wood	0.50 - 2.00%
Textiles	0.10 - 1.00%
Paper Coatings	0.05 - 0.75%
Canvas & Cordage	0.50 - 2.00%
Adhesives	0.05 - 0.20%
Inks	0.05 - 3.00%

Packaging

Polyphase® AF1 is packaged in:

Package Type	Net Weight
Pail	45 lbs / 20.4 kg
Small Drum	100 lbs / 45.4 kg
Large Drum	500 lbs / 226.8 kg
Tote	2600 lbs / 1179.3 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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