

EPA Registration No.: 5383-91
Product Code: 10229

POLYPHASE[®] 604

Fungicide

Description

Polyphase[®] 604 is an aqueous fungicide effective against a wide variety of fungal organisms.

Application & Use

Polyphase 604 may be used as a fungicide for paints, wood protective stains, textiles, cutting oils, textile processing solutions, paper coatings, adhesives, inks, and canvas and cordage.

Product Highlights

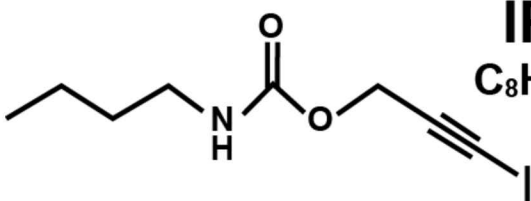
- Zero VOC
- No surfacants
- Completely water soluble at all concentrations
- High temperature stability (200 - 210°C)

Physical Properties

The following are typical properties of Polyphase 604; they are not to be considered product specifications.

Appearance: Clear amber liquid
 Specific Gravity, 25°C: 1.2
 Odor: Mild characteristic
 Soluble: In aqueous based systems

Active Substance

6%	3-Iodo-2-propynyl butylcarbamate	 <p>IPBC C₈H₁₂INO₂</p>
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Antimicrobial Activity

Fungi	MIC	Fungi	MIC
<i>Alternaria alternate</i> ATCC #20084	0.12	<i>Ceratocystis pilifera</i> ATCC #15457	0.25
<i>Aspergillus flavus</i> ATCC #9643	0.06	<i>Cladosporium cladosporioides</i> ATCC #16022	0.03
<i>Aspergillus niger</i> ATCC #9642	0.11	<i>Penicillium pinophilum</i> ATCC #11797	0.15
<i>Aspergillus niger</i> ATCC #6275	0.17	<i>Penicillium sp.</i> ATCC #12667	0.14
<i>Aspergillus versicolor</i> ATCC #11730	0.10	<i>Trichoderma virens</i> ATCC #9645	0.47
<i>Aureobasidium pullulans</i> ATCC #9348	0.02		

*Minimum inhibitory concentration (MIC) is an indication of which microorganisms can be controlled by a preservative and the concentration at which growth of the test organism is inhibited under laboratory conditions. MIC values are expressed in parts per million (ppm). The lower the MIC value in ppm, the greater the product's effectiveness. MIC values should only be used for relative comparisons. Practical use concentrations are generally much higher and should be established through field tests and actual use.

Function/Activity

	% Wt/Wt
Cutting Oils	0.5 – 8.75
Sapstain control	5.0–30
Wood protective stain	5.0 –15
Millwork	5.0–30
Textile processing solutions.....	1.0-20

Formulation Considerations

Cutting Oils

Polyphase® 604 may be used in cutting oils to prevent fungal growth at concentrations of 0.5-8.75%. It should be added to the concentrated cutting fluid to obtain the desired concentration in the diluted fluid. It is recommended that biocide levels be checked periodically as many cutting oils are unstable.

Wood Protective Stains

For use on wood in above-ground applications only. Levels of 5-15% Polyphase 604 are suggested depending on the type of protection required, severity of end use conditions and the duration of protection required. All products should be field tested in order to insure that an effective level of Polyphase 604 is being used.

Sapstain Control

For the prevention of fungi on freshly sawn lumber, a concentration of 5 - 15% Polyphase 604 is suggested as a starting level. 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.

Millwork

Polyphase 604 may also be used on millwork, including doors, window frames, exterior siding, composite board, plywood and other construction lumber when protection against the growth of fungi is required. Wood treated with Polyphase 604 does not change in appearance and may be painted when dry. For applications of this type, Polyphase 604 should be formulated in water-based systems. These formulations may be applied by either immersion, spray or brush methods. Suggested use range of Polyphase 604 is 5-30% based on formula weight, depending on the type of protection required. Polyphase 604 is not recommended for wood surfaces which come into direct contact with food.

Textile Processing Solutions

Polyphase 604 may be used as a fungicide in aqueous based coatings or dyes and processing chemicals (lubricants, sizing, etc.), which are applied to the textile material. Typical end use of these materials is in carpets, canvas and cordage, drapes, shower curtains, etc. Polyphase 604 should be added at the end of the production cycle. Polyphase 604 will normally impart protection to the substrate when added at levels of 1.0-20% based on the total formula weight. Not for use in fabrics for human wear.

Shipping & Packaging

Polyphase® 604 is packaged in:

Shipping Container	Net Weight
Drum	40 lbs. / 18 kg
Drum	450 lbs. / 204 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 product label.

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