SKUDO Anti-Fungal Protect

Skudo Anti-Fungal Protect is a novel CIT, AOX and VOC-free, synergistic biocide specifically developed for the wet- state protection of water based formaldehyde sensitive products.

Chemical and Physical Characteristics

Composition:	A water based formulation of 2-methyl-4-isothiazolin-3-one (MIT) and 1,2-benzisothiazolin -3-one (BIT)
Appearance:	Yellow/Orange
Odour:	liquid
Density (20°C):	Mild
MIT Content:	1.030 g/cm³
BIT Content:	2.35 - 2.65%
pH (20°C):	2.35 - 2.65%
Solubility:	7.50 - 9.5
Stability in application:	Miscible with water and most lower alcohols and glycols Stable in the presence of light, over the pH range 2 - 10 and up to 80°C

Biocidal Properties

Skudo Anti-Fungal Protect has a very broad microbiological activity spectrum showing truly synergistic activity against bacteria, moulds and yeasts that may cause infection and deterioration of water based products, including the following organisms:

Typical Spoilage Organisms

Bacteria	Moulds	Yeasts
Achromobacter sp.	Aspergillus sp.	Candida albicans
Aeromonas sp.	Cephalosporium sp.	Rhodotorula sp.
Alcaligenes sp.	Cladosporium sp.	Saccharomyces cerevisiae
Bacillus sp.	Fusarium sp.	
Escherichia coli	Paecilomyces variotii	
Flavobacterium	Penicillium funiculosum	
sp. Klebsiella sp.		
Proteus sp.		
Pseudomonas sp.		
Streptomyces sp.		

Applications / Use Levels

Skudo Anti-Fungal Protect is suitable for the wet-state preservation of a wide range of aqueous products including paints, polymer emulsions, adhesives, ceramic glazes, fillers and sealants.

Skudo Anti-Fungal Protect is particularly effective in products having an alkaline pH and for the preparation of ecologically acceptable formulations.

Normal use concentrations are in the range 0.20 - 0.40%, depending on the product to be protected and the environmental conditions to which it will be exposed. The precise level required by a specific formulation can be determined by contacting your local representative.

Addition / Compatibility

Skudo Anti-Fungal Protect can be added at any time during production. However, it is advised to add it as early as possible to give protection throughout the production process. Care should be taken to ensure that temperature, pH and redox potential at the point of addition are suitable for stability of the product.

Skudo Anti-Fungal Protect is compatible with most formulations in which its application is recommended and it may be used in formaldehyde sensitive systems. Nevertheless, users are advised to carry out their own tests or seek further advice.

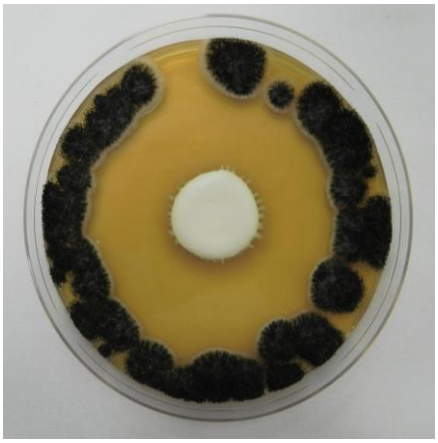
Performance Examples:

Untreated surface protection

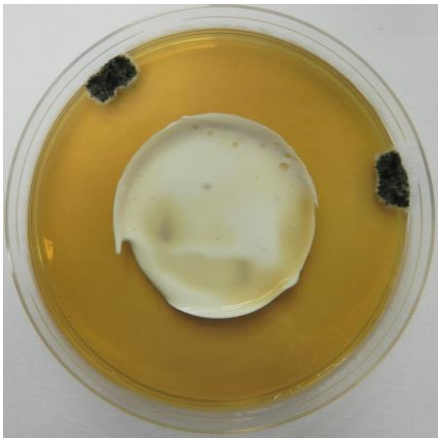
Skudo HT mat with **Skudo Anti-Fungal Protect** incorporated into the coating

Skudo Basecoat containing **Skudo Anti-fungal Protect**

Wet Product



Dried Compound



Each of the images shows a clear zone of inhibition when compared to the untreated fabric.

Packaging / Storage / Transport / Regulatory Approvals

Packaging:	25 and 200Lt plastic drums and 1,000Lt intermediate bulk containers
Shelf Life:	12 months from production date when stored at approximately 20°C
Storage:	Store in the original containers and protect from extremes of temperature. **Skudo Anti-Fungal Protect** is frost sensitive. At temperatures below 1°C BIT and BIT sodium salt may crystallise. However, after warming to a maximum temperature of 50°C any crystals formed will re-dissolve and the product can be used with no impairment of activity.
Transportation	**Skudo Anti-Fungal Protect** is classified as non-®hazardous for transport
Regulatory Approvals:	The active substances of **Skudo Anti-Fungal Protect** have BfR chapters 14 and 36, FDA 21 CFRs 175.105, 176.170 and 176.180 and a wide range of other regulatory approvals. The US EPA registration number of the product itself is 67071-29.

Safety / Labelling / Toxicology

For detailed information on the toxicology and handling of **Skudo Anti-Fungal Protect** and advice on the labelling of products in which it may be used, please refer to the separate Material Safety Data Sheet.