Technical Data

Nipacide IPBC 20

General Description

Nipacide IPBC 20 is a low toxicity biocide specifically developed for the complete microbiological protection of water based and solvent based products against algal and fungal spoilage in the dry and wet state. Nipacide IPBC 20 is a glycol based liquid.

Composition

Nipacide IPBC 20 is one of a comprehensive range of biocides manufactured by Clariant UK Ltd. and is described chemically as a a concentrate of 3-iodo-2-propynylbutylcarbamate.

Typical Properties

Nipacide IPBC 20 has the following typical properties:

Property		Analysis
Appearance:		Clear, Yellow Liquid
pH:		7.0 (@ 0.1% in water)
Solubility:	*Water*	Miscible
	Oil	Miscible
Stability:	*Light*	Stable
	pH range	4-9

It should be noted that the above typical properties do not constitute a specification.

Biocidal Properties

Nipacide IPBC 20 is effective against fungi and algae.

Applications

Nipacide IPBC 20 is recommended for a wide range of applications including adhesives, polymer emulsions, MWF and paint where protection against fungi and algae is required in the wet state and dry state.

Use Level

The recommended use level of Nipacide IPBC 20 to preserve most product types is normally in the range 0.1-2.0% based on the total weight of the finished product.

MIC Levels

Nipacide IPBC 20 has a broad spectrum of activity which includes the following common spoilage organisms;

Organism	MIC (ppm)
Bacteria:	
Pseudomonas aeruginosa	>1500
Pseudomonas putida	>1500
Proteus vulgaris	800
Escherichia coli	600
Staphylococcus aureus	200
Fungi:	
Aspergillus niger	10
Penicillium mineoluteum	10
Fusarium solani	600
Geotrichum candidum	10
Yeast:	
Candida albicans	25

Compatibility

Nipacide IPBC 20 is compatible with most raw materials used in microbiologically susceptible products. Compatibility of Nipacide IPBC 20 with the application should always be checked before use.

Laboratory Service

The Clariant UK Technical laboratories are available to assist in the determination of the optimum use level required in a specific product. This service may be of particular use where the product is known to be susceptible to microbiological contamination or that the environmental conditions of the production plant or use application are known to enhance contamination.

Storage Conditions and Containers

Storage Conditions

Nipacide IPBC 20 should be stored at temperatures within the range 4-40^{o}C. Containers containing Nipacide IPBC 20 should not be exposed to direct sunlight. Storage conditions should also be in conformance with applicable legal, fire and insurance regulations.

Shelf Life

Under correct storage conditions the normal shelf life for this product is 24 months.

Containers

Nipacide IPBC 20 is available in 25kg Kegs, 200kg Drums and 1 Tonne IBC containers.

Container disposal

Prior to disposal, residual contents of containers of Nipacide IPBC 20 should be drained into the product to be preserved. It is likely, however, that a small quantity of Nipacide IPBC 20 will remain in the container and this should be deactivated and drained to waste. To ensure that containers are not reused, they should be pierced before disposal.

Handling

Where direct handling is necessitated, personnel should always wear protective clothing. This will include a rubber apron, suitable impervious full-length gloves and footwear. Protective chemical splash goggles should also be worn. For further details please refer to the Clariant UK 'Recommendations for the handling of biocides'.

Ecotoxicity

Nipacide IPBC 20 is biodegradable when diluted below the minimum inhibitory concentration and does not bioaccumulate.

Toxicology

Nipacide IPBC 20 toxicology is as follows:

Acute Oral LD_{50}(rat):	>2000mg/kg
Sensitisation:	Components are known sensitisers
Classification:	The mixture is harmful

First Aid

Should Nipacide IPBC 20 be mishandled the following procedures are recommended:

Inhalation	Move the exposed person to fresh air at once. Seek prompt medical attention.
Ingestion	Rinse mouth thoroughly with water. Seek medical attention.
Skin Contact	Promptly wash contaminated area with plenty of water. Seek medical attention.
Eye Contact	Promptly wash eyes with water. Seek medical attention.

Note: For full details on first aid measures please see the Material Safety Data Sheet.

Transport

The original containers should always be used for safe storage and transport. Should it be necessary to transfer to alternative containers please contact Clariant UK Ltd..

Spillage/Disposal	Spillages of Nipacide IPBC 20 should be absorbed using an inert material such as vermiculite and transferred to containers for disposal. Spillages should be disposed through specialist disposal contractors and according to local regulations.
Fire/Explosion	Nipacide IPBC 20 is non-flammable and non-explosive.
Other Relevant Information	Regulations: WGK Classification: Other:

All information is given in good faith but without warranty. Customers should ensure that their use of the products comply with specific regulations in the relevant market.