Product Fact Sheet

NIPACIDE CFX®

Wet-State Preservative for industrial water based products.

CLARIANT INDIA LIMITED

Reliable Tech Park, Gut No. 31,
Village Elthan, Thane - Belapur Road,
Airoli, Navi Mumbai 400 708
Maharashtra, India

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COMPOSITION

Aqueous solution of 5–Chloro–2–methyl-isothiazolin–3-one (CMIT) + 2–Methyl–isothiazolin– 3-one (MIT) and 1,6 – dihydroxy - 2,5 – dioxahexane

PRODUCT PROPERTIES[*)]

Appearance	Colourless to Pale Yellow Clear Liquid
Active Content	CMIT + MIT : 0.10 – 0.30% 1,6 – dihydroxy - 2,5 – dioxahexane: approx. 45.0%
pH (as such)	2.50 - 5.00
Specific Gravity (at 30°C)	1.000 – 1.100

*) These characteristics are for guidance only and are not to be taken as product specifications. The tolerances are given in the product specification sheet. For further information on product properties, toxicological, ecological and safety data, please refer to the safety data sheet.

Solubility

Soluble in Water.

Storage stability

365 Days under recommended storage conditions in sealed original containers.

Description

Nipacide CFX is a water based biocide based on a combination of isothiazolinones and formaldehyde donor for the complete in-can and head space microbiological protection of industrial water based products against bacterial and fungal spoilage in the wet state. It demonstrates a broad spectrum of activity with fast action against microbial contamination in various applications.

Application

Nipacide CFX is recommended for the preservation of a wide range of applications including water based adhesives, polymer emulsions, water based decorative paints, pigment slurries, metal working fluids, sealants and tile grouts, household products, printing inks, car care products and construction chemicals where protection against fungi and bacteria is required in the wet state.

It is effective against a wide range of common spoilage organisms including gram positive and gram negative bacteria, yeast and fungi. It can be used over a pH range 4 - 9 and temperature range up to 40°C (short period up to 60°C). When products are prone to surface contamination by fungi and head space protection is required, Nipacide CFX should be the biocide of choice as it is particularly effective at providing head space protection, in-can, by the controlled release of formaldehyde.

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Use Levels

Nipacide CFX should be evaluated in finished products at levels between 0.1% and 0.3% based on the total weight of the finished product. Please note that Nipacide CFX above 0.30% requires R43 (causes sensitization by skin contact) hazard labeling.

The dosage required to adequately preserve the product depends on various factors including the nature and susceptibility of the product to microbial degradation, initial microbial content in the product, processing and storage conditions. It is recommended to conduct trials for new applications to access the performance of the biocide in the product in terms of stability, compatibility and biological effectiveness.

Incorporation

Nipacide CFX is easy to incorporate into water based systems. It is recommended to add a small dosage of Nipacide CFX at the start of the process to combat any microbial contamination of the raw materials and process waters and to ensure process hygiene. If elevated temperatures or highly alkaline pH values are likely to occur during processing, it is recommended that Nipacide CFX be added after these production steps. It should be blended efficiently into the formulation to ensure optimum dispersion and performance.

Microbiological Data

Nipacide CFX exhibits a broad spectrum of activity which is demonstrated by the following MIC values** against some common microorganisms associated with wet-state spoilage:

Organism	MIC (ppm)	Organism	MIC (ppm)
Bacteria:		**Fungi:**	
Pseudomonas aeruginosa	250	*Aspergillus niger*	75
Pseudomonas putida	250	*Penicillium mineoluteum*	75
Proteus vulgaris	125	*Fusarium solani*	75
Escherichia coli	100	*Geotrichum candidum*	200
Staphylococcus aureus	200	**Yeast:**	
		Candida albicans	150

** MIC values should only be used for relative comparisons. Practical use concentrations are generally much higher.

Chemical Compatibility

Nipacide CFX is compatible with most raw materials used in the manufacture of industrial water based products. However it is recommended that the compatibility of Nipacide CFX with the application should always be checked and evaluated before use.

Clariant Technical Service

Clariant technical service staff is available to assist customers in the determination of the optimum use level of biocide required to fully protect their product. The staff is on hand to assist customers with all technical enquiries relating to product protection. Full microbiological efficacy testing is available at the Clariant Microbiology Laboratory including wet-state and dry-film challenge tests, post-treatment of contaminated products, modified diffusion tests and plant hygiene audits at customers' production facilities.

Regulatory Support

Various regulations may be applicable to our products and their possible applications to safeguard human and environmental health. These regulations may vary depending on factors like end use, country or region of use, components of products, etc. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. We have a dedicated function, Product Stewardship-India, to take care of regulatory aspects of the products marketed by Clariant-India. You are requested to kindly check with us concerning compliance of our products with respect to various regulations.

Use biocides safely. Always read the label and product information before use.

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