

**General Description** **UN-P102C** is an 'IN-CAN biocide' manufactured by United Nanotech Products Ltd. The product is specifically developed for the complete microbiological protection of water based paints against microbial spoilage in the wet state.

**Composition** **UN-P102C** is described chemically as a combination of metal nanoparticles, isothiazolinone etc.

**Typical Properties** **UN-P102C** has the following typical properties:

Property	Analysis
Appearance	Pale yellowish solution
Solubility	Water Oil
Stability	Light Temperature
Specific gravity	1.05 – 1.07
pH	3.9 – 4.0
Active component	~ 10 %

**Biocidal Properties** **UN-P102C** is effective against bacteria and fungi.

**Applications** **UN-P102C** is recommended for water-based paint where protection against fungi and bacteria is required in the wet state.

**Addition** **UN-P102C** should be added under good stirring at the dispersion stage. Good homogeneous distribution must be observed.

**Use Level** The recommended use level of **UN-P102C** is normally in the range 0.1-0.4% based on the total weight of the finished product.

**Special Features** **UN-P102C** is useful as In-Can preservative for water-based paints and coatings. The enhanced surface area of nanoparticles allows increased interaction of the additive particles with fungus and bacteria. Moreover, higher surface area of nanomaterials also yields thin layer effect, resulting out use of smaller amount of the product for the same area. Thus increase in surface area of aqueous phase **UN-P102C** results in great improved efficiency and longevity of water based decorative paints.

# UN-P102C



**Compatibility** **UN-P102C** is compatible with most of the water-based paint raw materials. Compatibility of **UN-P102C** with the application should always be checked before use.

**Antimicrobial Activity** **UN-P102C** has a broad spectrum of activity which includes the following common spoilage organisms;

<b>Bacteria</b>	<b>Fungi</b>
<i>Escherichia coli</i> <i>Pseudomonas putida</i> <i>Pseudomonas aeruginosa</i> <i>Klebsiella pneumonia</i> <i>Staphylococcus aureus</i>	<i>Alternaria alternate</i> <i>Aspergillus niger</i> <i>Aspergillus oryzae</i> <i>Chaetomium globosum</i> <i>Cladosporium cladosporioides</i> <i>Fusarium solani</i> <i>Penicillium glaucum</i> <i>Penicillium ochrochloron</i> <i>Sclerophoma pithyophila</i> <i>Ulocladium atrum</i>

**Storage Conditions** **UN-P102C** should be stored at temperatures within the range 5-55°C. Containers containing **UN-P102C** 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.

**Safety Data Sheet** MSDS is available upon request.