

NUMBER 4882-1 (Supersedes 4882)

Nuosept™ 497G preservative

Preservative for Aqueous Products

EPA Registration No. 1529-34
EINECS No. 220-120-9 (BIT)

Description

Nuosept 497G preservative is a aqueous dispersion of 1,2-benzisothiazolin-3-one (BIT). BIT is a non-metallic, non-chlorinated, formaldehyde free biocide.

Key Attributes

Nuosept 497G preservative offers many advantages.

- BIT (1,2-Benzisothiazolin-3-one) has a proven record of performance as a broad spectrum antimicrobial agent.
- Spectrum includes wide range of commonly occurring bacteria, yeast and fungi (see MIC data).
- Antimicrobial activity is not dependent on pH.
- Stable and effective over a wide pH range (4-12).
- VOC free
- Non-settling
- Freeze-thaw stable
- May be incorporated into a product during any step of the manufacturing process.
- Odorless, translucent, amber liquid that is broadly compatible with aqueous systems.

Applications and Usage Notes

Nuosept 497G preservative is recommended for use in:

- | | | |
|--------------------------|-----------------------------------|------------------------------------------------|
| • Emulsion paints | • Ready-mixed cements | • Textile spin-finish solutions |
| • Oil-in-water emulsions | • Ready-mixed wallboard compounds | • Pesticide formulations |
| • Tape joint compounds | • Spackling compounds | • Leather processing solutions |
| • Water-based adhesives | • Aqueous slurries | • Lattices |
| • Grouts | • Titanium dioxide slurries | • Metal working fluids |
| • Caulks | • Inks | • Preservation of fresh animal hides and skins |
| • Sealants | • Casein/rosin dispersions | |

Typical Product Properties

Active Ingredient: 1,2-Benzisothiazolin-3-one (BIT)	19.0%
Physical Form	Light yellow – light brown
pH (10% aqueous solution)	8.4 - 10
Specific Gravity (25°C)	1.18 – 1.21
VOC (%)	No VOC

Antimicrobial Spectrum

Minimum inhibitory concentrations (MIC) were determined by serial dilution of Nuosept™ 497G preservative and are shown in the table.

Test Organism	MIC (ppm)
<i>Bacteria</i>	
<i>Bacillus subtilis</i>	30
<i>Enterococcus faecalis</i>	50
<i>Streptococcus epidermidis</i>	50
<i>Pseudomonas aeruginosa</i>	250
<i>Enterobacter cloacae</i>	150
<i>Enterobacter aerogenes</i>	150
<i>Escherichia coli</i>	15
<i>Xantomonas maltophila</i>	250
<i>Yeast</i>	
<i>Candida albicans</i>	40
<i>Saccharomyces cerevisiae</i>	140
<i>Rhodotorula sp.</i>	160
<i>Streptoverticillium</i>	100
<i>Molds</i>	
<i>Aspergillus niger</i>	190
<i>Aspergillus oryzae</i>	180
<i>Aureobasidium pullulans</i>	120
<i>Chaetomeum globosum</i>	50
<i>Gloeocladium virens</i>	180
<i>Penicillium sp.</i>	90
<i>Penicillium funiculosum</i>	50
<i>Talaromyces flavus</i>	90

Use Recommendation

The amount of Nuosept 497G preservative required to adequately protect a formulation is dependent on the susceptibility of the product to biodegradation and the combined bioburden of the raw materials and potential contamination sources of a product. Our experience suggests that a 0.03-0.25% level of Nuosept 497G preservative by weight in the final formulation will protect aqueous products. The use level should not exceed 0.5% for any application. It is recommended that the selection of biocide use level be based on an evaluation of Nuosept 497G preservative at a ladder of concentrations in the product. To arrange for microbiological testing of your product, contact your Ashland representative.

Packaging Information

Product	Physical Form	Pkg Type	Net Wgt (lbs)	Net Wgt (kgs)
Nuosept™ 497G	Liquid	HDPE Pail	45 lbs	20.4 kg
Nuosept 497G	Liquid	Steel Drum	440 lbs	199.5 kg
Nuosept 497G	Liquid	HDPE IBC	2800 lbs	1,270 kg

Product Safety Information

For health and safety data and handling, storage and disposal procedures, please refer to the Safety Data Sheet (SDS) and product label.

Regulatory requirements governing the use, registration, and approval of industrial biocides around the world are continually changing and evolving.

All statements, information and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Ashland Inc. and its subsidiaries or affiliates assume legal responsibility. It is the customer's responsibility to ensure that its use of industrial biocidal products is in accordance with all applicable laws and regulations. In addition, customers are strongly advised to confirm that the industrial biocide they are purchasing has all necessary regulatory approvals for the intended use and the country where the product is going to be used.

To learn more, visit ashland.com

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