

NUMBER 4897

Nuosept™ 95 preservative

EPA Registration No. 1529-28

Description

Nuosept 95 preservative is a 50% aqueous solution of non-metallic, non-chlorinated organic compounds designed for use as a preservative in water-based products. Nuosept 95 preservative effectively prevents deterioration and spoilage during the manufacture, storage and service of products such as latex paints, latex emulsions, pigment dispersions and slurries, inks, adhesives, caulks, sealants, metalworking fluids, textile fiber-finish solutions, paper coatings, drilling muds and flooding fluids.

Key Attributes

- Effective at low dosage
- Non-yellowing
- Can be added at any point during the manufacturing process

Applications and Usage Notes

Adhesive: Adhesives based on natural products such as starch and dextrin are readily degradable. To protect these adhesives during manufacture and storage, Nuosept 95 preservative is recommended at 0.2 to 0.5 weight percent.

Adhesives based on latex emulsions are subject to spoilage. However, the severity of the spoilage depends on the resin type, organic additives and the pH. Typical use-levels of Nuosept 95 preservative in these systems range from 0.1 to 0.5 weight percent.

Construction Materials: Latex based caulks and sealants are used to seal joints or voids against water, air, dust and sound. They are often supplied as knife or gun-grade compounds for ease of application. To protect these materials during manufacture and on the shelf, the use of Nuosept 95 preservative at 0.1 to 0.5 weight percent is recommended.

Latex Emulsion: Raw latex emulsions, e.g., polyvinyl acetate or acrylic, can support microbial growth during transport and storage. Nuosept 95 preservative at a use level of 0.05 to 0.3 percent by weight is recommended.

Wax Emulsion: Nuosept 95 preservative is recommended at 0.2-0.3 weight percent to prevent spoilage during manufacture and service.

Ink: The shelf life of water-based fountain pen and printing inks can be increased by the addition of Nuosept 95 preservative at 0.1 to 0.5 weight percent.

Paint: Latex paints are susceptible to microbial spoilage. For example, the bacterial degradation of cellulosic thickened paints can cause thinning to unacceptably low viscosities. Nuosept 95 preservative at 0.1 to 0.4 percent by weight will prevent the microbial deterioration of latex paints.

Petroleum Production and Recovery: Nuosept 95 preservative at 0.05 to 0.2 weight percent is recommended for the preservation of drilling muds. Fluids used to flood strata for the secondary recovery of petroleum should contain 0.01 to 0.1 weight percent Nuosept 95 preservative.



Pigment Dispersion and Slurry: Clay and titanium dioxide slurries and dispersions of organic pigments require protection against deterioration of dispersants and other additives. Nuosept™ 95 preservative adequately protects these systems at concentrations of 0.05 to 0.3 weight percent.

Pigment dispersions use percentages are 0.1 – 0.3.

Pigment slurry use percentages are 0.05 – 0.1.

Paper Coatings: Treated paper and paperboard intended for producing, manufacturing, packaging, processing, treating or preparing food products must be limited to contact with dry food.

Paper coatings and printing colors based on natural products such as starch should be protected with 0.2 to 0.5 weight percent Nuosept 95 preservative.

Products based on latex emulsions are less susceptible to spoilage; consequently, the use of 0.05 to 0.3 weight percent Nuosept 95 preservative is recommended.

Metalworking Fluids: To prevent the spoilage of metalworking fluids, Nuosept 95 preservative is recommended at use levels of 0.1 to 0.2 percent based on the weight of the diluted fluid. Similar levels are recommended for use in recirculating systems.

Textile Fiber-Finish Solutions: To prevent the spoilage of textile finish solutions used in the coating of synthetic fibers (such as polypropylene), the use of 0.05-0.1 weight percent of Nuosept 95 preservative is recommended.

Use Level Summary

End Use	Reason for Treatment	Recommended Use Level ⁽¹⁾ of Nuosept 95 preservative	Point of Addition
Adhesives (Natural-Based)	To prevent spoilage during manufacture and storage	0.2 - 0.5	Add to water phase or post add.
Adhesives (Synthetic)	To prevent spoilage during manufacture and storage	0.1 - 0.5	Add to water phase or post add.
Caulks	To increase shelf life	0.1 - 0.5	Add to water phase during manufacture.
Drilling Muds	To prevent spoilage during manufacture, storage and service	0.05 - 0.2	Add to water phase or post add.
Flooding Fluids	To prevent spoilage during storage and service	0.01 - 0.1	Post addition.
Latex Emulsion	To prevent spoilage during transit and storage	0.05 - 0.3	Post addition.
Latex Paint	To prevent spoilage during manufacture and to increase shelf life	0.1 - 0.4	Add at any point during manufacture.
Inks	To prevent spoilage during storage and service	0.1 - 0.5	Post addition.
Paper Coatings	To prevent spoilage during manufacture and storage	0.1 - 0.5	Add to water phase or post add.
Pigment Dispersion	To increase shelf life	0.1 - 0.3	Add at any point during manufacture.
Pigment Slurry	To prevent spoilage during transit and storage	0.05 - 0.1	Add to water phase or post add.
Sealants	To increase shelf life	0.1 - 0.5	Add to water phase during manufacture.
Metalworking Fluids ⁽²⁾	To protect during usage	0.1 - 0.2	Add to water phase manufacture and service
Wax Emulsion	To prevent spoilage during manufacture and service	0.2 – 0.3	Post addition
Textile Fiber Finish ⁽³⁾	To prevent spoilage during manufacture and service	0.05 - 0.1	Add at any point during manufacture.

⁽¹⁾ Percent by weight of formulation. The optimum amount of Nuosept™ 95 preservative required for adequate preservation is best determined by conducting a series of test loadings and making any subsequent adjustments.

⁽²⁾ Only for use in enclosed metalworking systems.

⁽³⁾ Only for use in fibers that are not in direct contact with skin.

Typical Properties

Total Actives (Total Solids), minimum	50.0%
Appearance	Clear, pale yellow liquid
Odor	Mild, characteristic
Color (APHA)	250 max., clear
Viscosity (25 °C, cSt)	3.5 - 4
Specific Gravity (25°/25 °C)	1.133-1.155
Pounds per Gallon	9.45-9.64
Refractive Index (25 °C)	1.404-1.412
pH	6.0-7.5
Flash Point (SCC)	140 °F

Solubility (Active ingredients, grams/100 grams at 25 °C)

Water, methanol, ethanol, acetone, chloroform, ethylene glycol	soluble in all proportions
Hexane	0.2
Petroleum ether	0.2
Xylene	1.5
Benzene	2.8
Ethyl ether	28.0

Stability

Stable under normal conditions of storage. Protect from freezing.

Packaging Information

Product	Physical Form	Pkg Type	Net Wgt (lbs)	Net Wgt (kgs)
Nuosept 95	Liquid	HDPE Pail	40 lbs	18.1 kgs
Nuosept 95	Liquid	Steel Drum	475 lbs	215.4 kgs
Nuosept 95	Liquid	HDPE IBC	2800 lbs	1270 kgs

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.

Nuosept 95 preservative is approved by the U.S. Food and Drug Administration for food contact applications as defined by 21 C.F.R. 175.105 and 176.180.

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

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To learn more, visit ashland.com

EMAIL: specialtiessolutions@ashland.com

CHINA Tel: +86 212402 4888 DUBAI Tel: +9714 3818512 INDIA Tel: +91 22 61484646
MEXICO Tel: +52 55 52 76 6121 SINGAPORE Tel: +65 6775 5366
SWITZERLAND Tel: +4152 560 55 00

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