A safe, economical, non-paraben alternative for personal care

Kalama® and Purox®

Benzoate Preservatives & Antimicrobials for Personal Care

- **Globally Trusted:** Safe and effective in formulations up to pH 6.5 (approved for use in leave-on and rinse-off products)
- **Highest Purity Available:** Virtually odorless and colorless (superior color stability over other paraben alternatives and low-purity benzoates, which may yellow), low water content
- **Versatile:** Can be used in combination with other materials or boosters to extend preservation
- **Green:** Listed for use in products certified under green label programs, such as Ecocert, COSMOS, EU Ecolabel, and Nordic Swan
- **Gentle:** Sodium Benzoate is considered non-irritating to the skin by a WHO assessment

A Safer Alternative for Personal Care and Cosmetics Applications

Kalama® and Purox® **Sodium Benzoate**, **Benzoic Acid**, and **Benzyl Alcohol** are safe, effective solutions to preserve freshness and maintain the integrity of personal care formulations—controlling yeasts, molds, and bacteria in formulations up to pH 6.5—while also meeting consumer demand for **clean labels without parabens, formaldehyde donors, or sensitizers**.

Kalama and Purox benzoate preservatives offer an **optimal balance of preservative efficacy, economy, and a consumer-friendly profile.**

Ultra-Pure Ingredients from a Reliable Global Supplier

While benzoic acid occurs naturally many fruits, cloves, and cinnamon, Purox benzoic acid is synthetically produced at our world-scale facilities in Kalama, Washington, USA and Rotterdam, Netherlands. It is also used to produce our high quality benzoates at our FSSC 22000-certified operations, a GFSI-recognized certification program.

Using an innovative purification technology, Emerald produces the purest grade of benzoic acid available—with a **guaranteed purity level of at least 99.98%**—to meet the highest quality standards of our customers. It is considered GRAS (U.S. FDA) and approved by the EU Commission for permitted uses and levels.

Emerald Performance Materials®
Kalama Chemical

Purox®

		Properties	% Solubility at 25C	Formulating Tips	Face/Neck/Body Care/Sun	Shampoo	Conditioner	Shower/Bath, Liquid Soaps	Antipersipirant / Deodorant	Fragrance	Wipes	Oral Care	Feminine Hygiene	Cold / Cough / Pain	Topical Ointments / Lotions
					Applications										
Benzoic Acid	**Purox® B Food/Pharma** *USP / NF / EP / JP*	**pH** ~4.0 (not measured due to low water solubility) **Purity** 99.98% minimum **Form** Flakes ("chips")	• Water: ~1.7 (pH 4.5), ~0.5 (3.5), <0.08 (2.5) • Propylene Glycol: 15.6 • Glycerin: >0.85 • Mineral Oil: very low • Isopropyl Myristate: 6.0 • Cyclopentasiloxane: 0.3 • Polydimethyl Siloxane: 0.1	Effective at pH 3 - 6.5. Little impact on viscosity. Typically used at 0.3 - 0.5% (wt) and in combination with other preservatives.	○	○					○	○	○	○	○
Benzoate Salts	**Purox® S Grains** *NF / FCC / EP / BP / JP* **Kalama® Sodium Benzoate** *NF / FCC / EP*	**pH** Slightly alkaline **Purity** 99.9% minimum (Purox), 99.0% minimum (Kalama) **Forms** Dense, powder, extruded	• Water: 38.0 • Propylene Glycol: 15.0 • Glycerin: >2.0 • Mineral Oil: very low • Isopropyl Myristate: 0.2 • Cyclopentasiloxane: negligible • Polydimethyl Siloxane: negligible	Effective at pH 3 - 6.5. Little impact on viscosity. Use salt stable thickener. Typically used at 0.3 - 0.5% (wt) alone or with other preservatives.	●	●	○	●			●	●	●	●	●
Benzyl Alcohol	**Kalama® Benzyl Alcohol** *NF / FCC / EP / BP / JP*	**pH** Slightly acidic **Purity** 99.0% minimum (chlorine-free) **Form** Colorless liquid	• Water: 4.0 • Propylene Glycol: 100.0 • Glycerin: 100.0 • Mineral Oil: 1.4 - 1.6 • Isopropyl Myristate: >2.0 • Cyclopentasiloxane: >2.0 • Polydimethyl Siloxane: 0.5	Wide pH effectiveness. Slight impact on viscosity. Use salt stable thickener. Typically used at 0.3 - 0.5% (wt) alone or with other preservatives. Also used as a solvent and as a fragrance fixative.	●	○	●	○	○	●	○	●			

● Major Application ○ Effective

Emerald Kalama Chemical is a leading global supplier of benzoic acid, benzaldehyde, and related downstream specialties, with world-scale, backward integrated facilities in Kalama, Washington (USA) and Rotterdam, Netherlands. Products include benzoate preservatives, intermediates, high purity flavor and fragrance ingredients, plasticizers, coalescents, antioxidants, and accelerators. With manufacturing in the United States and Europe and a global sales and distribution network, we serve customers globally.

These products are also available through our distribution partners. Please contact us for additional information.

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