



Potassium Sorbate is a widely used food

preservative that helps to inhibit the growth of mold, yeast, and fungi. It is the potassium salt of sorbic acid and is effective in extending the shelf life of various food products, beverages, cosmetics, and pharmaceuticals.

Chemical Properties

- **Appearance:**
- Potassium sorbate is a white to slightly yellow crystalline powder or granules that are odorless.
- **Solubility:**
- Potassium sorbate is highly soluble in water, with a solubility of about 58.2 g/100 mL at 20°C. It is less soluble in ethanol and other organic solvents.
- **Melting Point:**
- The melting point of potassium sorbate is approximately 270°C (518°F) when it decomposes.

- **pH:**
- **Potassium sorbate is most effective as a preservative in acidic conditions (pH 3–6). When dissolved in water, it creates a slightly alkaline solution, but in an acidic environment, it converts to sorbic acid, the active form that inhibits microbial growth.**
- **Reactivity:**
- **Potassium sorbate is stable under normal conditions but can slowly oxidize when exposed to air, light, or heat, which may reduce its effectiveness over time. In solution, it converts to sorbic acid in acidic environments, where it exerts its preservative action.**
- **Antimicrobial Activity:**
- **Potassium sorbate inhibits the growth of a wide range of microorganisms, including mold, yeast, and some bacteria. It works by disrupting the cell membranes of microbes and interfering with their metabolic processes, particularly in acidic environments.**

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