



## Sodium Lauryl Sulfate (SLS) is a widely

used anionic surfactant known for its foaming and cleansing properties. It is commonly found in personal care products, household cleaners, and industrial applications due to its effectiveness in removing dirt and oil

## Chemical Properties

1. **Appearance:**
  - SLS is typically a white, powdery solid or a viscous liquid depending on the formulation. It may have a slight odor, but it is generally not very pronounced.
2. **Solubility:**
  - Sodium lauryl sulfate is highly soluble in water, forming a clear solution or a stable foam. Its solubility in water is due to the ionic nature of the sulfate group, which interacts well with water molecules.
3. **Boiling Point:**
  - SLS does not have a distinct boiling point as it decomposes before boiling. It decomposes at temperatures above 280°C (536°F).

4. **pH:**
  - **The pH of SLS solutions can vary depending on concentration, but it is generally acidic to neutral. Typical formulations of SLS in products have a pH range of 6-8, which is close to the pH of the skin.**
5. **Reactivity:**
  - **SLS is stable under normal conditions but can be reactive with strong acids and bases. It can also degrade when exposed to high temperatures or strong oxidizing agents.**
6. **Foaming and Cleansing Properties:**
  - **SLS is well-known for its excellent foaming ability, which makes it effective in creating lather in products such as shampoos, body washes, and toothpaste. It works by reducing the surface tension of water, allowing it to spread and penetrate more effectively.**