

Summary of IS 4956:2020 Synthetic Detergents for Industrial Purposes

Synthetic detergents for industrial purposes are specially formulated cleaning agents designed for applications in various industries, such as manufacturing, hospitality, healthcare, and food processing. Unlike household detergents, industrial detergents are tailored to tackle heavy-duty cleaning needs, often involving larger volumes, tougher stains, and specific requirements for sanitation and residue removal.

The Bureau of Indian Standards (BIS) has formulated IS 4956:2020, which details the requirements, sampling methods, and testing procedures for synthetic anionic detergents intended for industrial applications. This current version represents the third revision of the standard, originally published in 1968. A key update in this revision is the restriction on phosphate content, as excess phosphorus in water bodies can lead to eutrophication and harmful algal blooms that threaten aquatic ecosystems. Phosphorus-based compounds, commonly used as builders in detergents, contribute to this environmental issue. To address this, the revised standard sets a maximum limit for phosphates and encourages the use of eco-friendly alternatives such as zeolite and tri-sodium citrate.

IS 4956:2020 classifies detergents into three types based on their physical form and active ingredient concentration. Type 1 includes powders or flakes with the highest concentration of active ingredients, followed by Type 2 (paste) and Type 3 (liquid). The standard specifies parameters such as detergency, ash build-up, and pH for each type. Additionally, IS 4956 mandates that detergents undergo skin irritation tests to assess potential hazards related to skin exposure.

The stringent testing requirements prescribed in IS 4956 for safety and performance underscores the importance of maintaining high standards in industrial cleaning agents. Implementation of this standard will ensure that industrial detergents are effective, safe, and environmentally responsible, supporting the needs of diverse industries while safeguarding ecological health.