



Sulphuric Acid: as per IS 266 - Summary

Sulphuric acid (H_2SO_4) is a highly corrosive, strong mineral acid that is colorless to slightly yellow in appearance. It is one of the most widely produced industrial chemicals and is essential in many industrial processes, such as the production of fertilizers (especially phosphates), petroleum refining, wastewater treatment, metal cleaning, and the manufacturing of detergents and dyes. Due to its highly reactive and acidic nature, sulfuric acid must be handled with extreme care to avoid safety risks.

Consumer Expectations

When purchasing or using sulfuric acid, consumers—particularly those in industrial sectors—expect the following:

1. **Purity and Concentration:** Consumers expect sulfuric acid to be of the appropriate concentration (typically 98% for industrial use) and purity, which is crucial for consistent performance in chemical processes.
2. **Safety:** Given its corrosive nature, safety is the top priority. Consumers expect sulfuric acid to be handled, stored, and transported following strict safety protocols to minimize exposure to workers or accidental spills. Proper packaging and labeling are essential for identifying hazards.
3. **Environmental Responsibility:** With growing awareness of environmental impacts, there is an expectation that sulfuric acid will be disposed of responsibly, neutralized when necessary, and not cause environmental harm.
4. **Reliable Performance:** Consumers expect sulfuric acid to consistently perform according to its specified properties, ensuring reliability in chemical reactions or processes, such as in fertilizers or battery manufacturing.

Indian Standard IS 266

Indian Standard IS 266 deals with the handling, storage, and transport of hazardous chemicals, including sulfuric acid, ensuring that safety and quality expectations are met. The IS addresses (a). Total acidity (b). Residue on ignition (c). Oxidizable impurities (d). Organic matter (e). Nitrates (f). Chlorides (g). Manganese (h). Ammonia along with (i). packing and labelling, (j). safety guidelines, (k). Handling and Disposal requirements.

By adhering to **IS 266**, manufacturers and consumers ensure that sulfuric acid is handled safely, meets quality expectations, and reduces environmental and health risks.

Prepared by. T.Arjun, Scientist-D / Joint Director, Bureau of Indian Standards, (MoCA), Mumbai Branch Office-2. (mobile: 9985755988.)