

## Epichlorohydrin

**Prelims:** Current events of national and international importance| Health

### Why in News?

Recently, The Bureau of Indian Standards (BIS) has introduced stringent standards for tea bags, including a ban on the use of potentially harmful chemicals such as epichlorohydrin.

- **Epichlorohydrin** - It is a *chlorinated epoxide* characterized by the substitution of a methyl hydrogen atom with chlorine.
- **Properties**
  - It is a clear, colorless, volatile, and *highly flammable liquid*.
  - It belongs to the class of chlorinated cyclic ethers and has a strong, chloroform-like odor.
  - When exposed to high temperatures and decomposes, it releases toxic fumes, including hydrochloric acid and other chlorinated substances.
  - It is *soluble in water*.
- **Applications**
  - Production of glycerol and unmodified epoxy resins.
  - Manufacturing of elastomers, *water-treatment resins*, surfactants, ion-exchange resins, plasticizers, dyes, pharmaceutical products, oil emulsifiers, *lubricants, and adhesives*.
- **Health Effects**
  - Irritation of the eyes, skin, and respiratory system.
  - Development of chemical pneumonitis and pulmonary edema.
  - Potential damage to the kidneys, leading to renal lesions.

### Bureau of Indian Standards (BIS)

- **BIS** - It is India's national standards body, established under the Bureau of Indian Standards Act, 2016.
- **Objective** - To promote the systematic development of standardization, marking, and quality certification of goods, along with related activities.
- **Operates under** - Administrative control of the Ministry of Consumer Affairs, Food and Public Distribution.
- BIS succeeded the Indian Standards Institution (ISI), which was established in 1947.
- **International representative** - India's representative in international standard-setting organizations, including the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).
- **Headquarters** - New Delhi.

## Reference

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