Epichlorohydrin

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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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