

## Environment & SDG Himalaya Fellowship

### Activity-1

#### Topic for Activity- REXINE CLOTHING

Rexine was the registered trademark of an artificial leather leathercloth fabric produced in the United Kingdom by Rexine Ltd of Hyde, near Manchester, England. It was made of cloth surfaced with a mixture of cellulose nitrate, camphor oil, pigment and alcohol, embossed to look like leather. Rexine was discontinued in 2005, but similar leathercloth fabrics continue to be produced by multiple manufacturers, including the original manufacturer.



#### Q1- Harmful effects of rexine in environment?

Some harmful effects of rexine are-

1. Rexine is non-biodegradable, which means that it cannot decompose naturally. When rexine products are disposed of improperly, they can end up in landfills, where they can take hundreds of years to break down.
2. Rexine is made from PVC or PU, which are both known to contain toxic chemicals such as phthalates, lead, and cadmium.
3. The production process of rexine involves the use of several chemicals, including solvents and dyes, which can have harmful effects on the environment.
4. The production of rexine also has a significant carbon footprint. The use of fossil fuels in the production process, as well as the transportation of raw materials and finished products, contributes to greenhouse gas emissions, which contribute to climate change.

#### Q2- How to prevent harmful effects of rexine?

We can prevent harmful effect of rexine by-

1. PVC can release harmful chemicals when exposed to heat, so avoid placing rexine products near heat sources such as radiators or direct sunlight.
2. When you are done with a rexine product, make sure to dispose of it properly. PVC does not decompose easily and can release harmful chemicals when it breaks down, so do not burn or bury it.
3. If you do have rexine products in your home or workplace, make sure to keep the area well-ventilated.
4. If you do handle rexine products, wash your hands thoroughly afterward.

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### **Q3- How rexine is made?**

The process of making Rexine is-

1. A fabric base is selected, which can be made of cotton, polyester, or a blend of synthetic fibres.
2. The fabric is coated with a layer of cellulose nitrate, which is dissolved in a mixture of solvents. Other chemicals such as plasticizers, pigments, and stabilizers may also be added at this stage to improve the durability and appearance of the material.
3. The coated fabric is then dried in an oven or under heat lamps to evaporate the solvents and harden the coating.
4. The finished Rexine material may then be embossed, printed, or treated with additional coatings to enhance its texture or water resistance.

### **Q4- Is rexine dangerous than leather?**

Rexine is generally considered to be less durable than leather and may crack or peel over time, which can be a potential safety hazard. Additionally, some types of rexine may contain toxic chemicals, such as phthalates, which are used to soften the material. These chemicals can be harmful to human health if they are ingested or inhaled over a long period of time.

Leather, on the other hand, is a natural material and generally considered to be safe for use. However, some types of leather may be treated with chemicals during the tanning process, which can be harmful to the environment and potentially to human health. Additionally, leather production requires the use of large amounts of water and energy, which can have a negative impact on the environment.

### **Q5- What are the impact of rexine industry on water bodies?**

1. The production of rexine can have a negative impact on water bodies if proper measures are not taken to control the release of pollutants from the manufacturing process.
2. The production of PVC, one of the main materials used in rexine, involves the use of chemicals that can be toxic to aquatic life if they are released into water bodies.
3. PVC production involves the use of chemicals such as vinyl chloride, ethylene dichloride, and diethylhexyl phthalate (DEHP), which are known to be hazardous to the environment and human health. These chemicals can be released into the environment through the wastewater from the manufacturing process.
4. In addition to the release of pollutants during the production process, rexine products can also contribute to water pollution through their disposal. Like all plastic materials, rexine is not biodegradable and can persist in the environment for a long time. When rexine products are discarded improperly, they can end up in water bodies and contribute to the accumulation of plastic waste, which can harm aquatic life and disrupt ecosystems.

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5. To minimize the impact of the rexine industry on water bodies, it is important for manufacturers to implement measures to control the release of pollutants during the production process and to promote the proper disposal of rexine products through recycling and other sustainable practices.

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