

Propylene Oxide (HPPO)

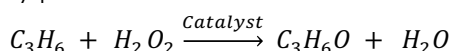


Propylene Oxide (HPPO)

Technology Introduction

Propylene Oxide is known as one of the most important intermediate chemicals for producing many chemical products like propylene glycols, polypropylene glycols, polyurethane, and many other specialty chemicals.

The IPT HPPO technology uses hydrogen peroxide as the epoxidation agent of propylene in presence of a zeolite catalyst in slurry phase.



Process

The main steps of IPT HPPO technology are:

- Epoxidation Reaction
- Product Separation
- Methanol Recovery
- Propylene Recovery
- Propylene Oxide Purification
- Catalyst Reactivation

Process Features

- Moderate operating condition;
- High conversion and selectivity;
- Highly flexible, safe and independent process operation;

- Slurry phase epoxidation reaction for well heat dissipation and prohibiting hot spots;
- Optimized reactor design;
- Heat integrated process design;
- Enhanced catalyst activity lifetime;
- Highly efficient filtration system;
- No toxic, or environmentally hazardous raw material, catalyst or effluent;
- Optional design of catalyst production unit;
- Optional design of catalyst regeneration unit.

Product Applications

- Polyurethane, and Unsaturated Polyester Resins (UPR)
- Iso-propanolamines, Allyl alcohol, modified starches/cellulosic polymers, and Propylene carbonate.
- Glycols and ethers, de-icer, plasticizer, detergent additive, and fragrance carrier.

Raw Materials

- Polymer-Grade Propylene
- Hydrogen Peroxide
- Methanol (Solvent)
- Ammonia
- Catalysts

Simple Flow Diagram

