Uses and Applications

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Propylene Oxide (PO)

1. Descirption

Propylene Oxide is a colorless, low-boiling and high volatile liquid with a sweet, ether-like odor. It is highly flammable and reactive, and storage and unloading areas must be appropriately designed and monitored.

2. Applications

- **Polyether Polyols**

The polyurethane industry is the largest consumer of Propylene Oxide. It utilizes polyether polyols made by reacting propylene oxide alone or in combination with other alkylene oxides. The most common initiators are polyols or polyamines such as glycerine, glycols, pentaerythritol, ethylenediamine, thoulenediamine, sucrose, sorbitol. Polyehter polyols are reacted with various diisocyanates to form polyutrthane foams and resins.

- **Propylene glycols**

Reation of propylene oxide with water leads to monopropylene glycol(MPG) with subsequent reactions leading to di-(DPG), tri-(TPG). Propylene glycols are used in a wide range of applications, including use as raw materials for unsaturated polyester resins, humectants in pharmaceuticals, cosmetic and fodd, hear transfer fluids, antifreezes and aircraft deicers.

- **Propylene glycol ethers**

Propylene glycol ethers are formed by base catalyzed reaction of PO with alcohols like methanol, ethanol, propanol, butanol or phenol. Subsequest reaction with additional PO leads to the corresponding di, tri- and higher glycol ethers. Propylene glycol ether are used as solvents and coupling agents in paints and in the production of coatings, resins and cleaners.

- **Other derivatives**

Propoxylated carbohydrates like cellulose and starch are used in application in the constructions, paints, food and pharmaceutical industies.

The decision on the use of Propylene Oxide applies to the finished products or any intermidiates should be decided by user own after consideration. Especially starch applications, we strongly recommend you to use it with adequate and sufficient testing procedures, and discontinue use if the criteria are ambiguous.
SKC Propylene Oxyde is not guranteed in any customer products and does not have any plan for the implemetation or action of Food Safety Management System for SKC Propylene Oxide facilities.

Contact information within Company

Should you need further information or questions, please contact us vis our website at http://skc.kr