A process is provided which comprises using a catalyst comprises a rare earth element supported on an inorganic heat-resisting carrier, when a monoethanolamine is selectively prepared by reacting an alkylene oxide with ammonia in a liquid phase. This catalyst has excellent monoalkanolamine selectivity and heat resistance; and therefore, even when the ratio of ammonia to the alkylene oxide is lower compared with cases where other catalysts are used, an equal or more amount of the monoalkanolamine can be formed, and thus the recovery cost of the unreacted ammonia is reduced. Further, since the total amount of the feed raw materials is reduced, apparatuses for the reaction system and recovery system can be made smaller, and thus the cost of equipment is reduced.

5600020

PROCESS FOR THE PREPARATION OF ALKOXYLATES USING ESTER COMPOUNDS AS CATALYST

Wehle Detlef; Kremer Gerno; Wimmer Ignaz Niedernhausen, GERMANY assigned to Hoechst Aktiengesellschaft

According to the invention, the alkoxylation of compounds containing active hydrogen atoms is carried out in the presence of specific alkaline earth metal salts of alkylor alkenylsuccinic monoesters as catalyst. The alkoxylates obtained have a narrow homolog distribution and a good appearance.

5600028

METHOD FOR PRODUCING LOWER POLYHYDRIC ALCOHOLS AND A NEW RUTHENIUM-BASED CATALYST USED IN THIS METHOD

Gubitosa Giusepp; Casale Bruno Novara, ITALY assigned to Montecatini Technologie S r l; Novamont S p

A ruthenium-based hydrogenation catalyst, particularly but not exclusively for hydrogenolysis under pressure of higher polyhydric alcohols, comprises ruthenium supported on granular activated carbon, and has: a specific surface area of from 600 to 1000 m2/g; a total pore volume of from 0.5 to 1.2 cm3/g; an apparent specific weight (bulk density) of from 0.45 to 0.55 g/cm3; an actual specific weight of from 1.9 to 2.3 g/cm3; a total volume of micropores having a radius smaller than 75 A of from 0.4 to 0.55 cm3/g; and an ash content of from 2 to 5% by weight. The catalyst is used in a method for the continuous production of lower polyhydric alcohols in a fixed bed reactor, by means of hydrogenolysis under pressure of higher polyhydric alcohols.

5600030

HYDROGENATION CATALYST, A PROCESS FOR ITS PREPARATION AND USE THEREOF

Deckers Gregor; Diekhaus Gerhard; Dorsch Bernd; Frohning Carl D; Horn Gerhardt; Horrig Horst B Xanten, GERMANY assigned to Hoechst Aktiengesellschaft

A process for hydrogenation of an aldehyde selected from the group consisting of propanal, n-butanal, and i-butanal comprising contacting said aldehyde with hydrogen in the presence of a hydrogenation catalyst comprising in the reduced state 25% to 50% by weight of metallic nickel 10% to 35% by weight of nickel oxide 4% to 12% by weight of magnesium oxide 1% to 5% by weight of sodium oxide the remainder being a water insoluble support material, wherein the total of said nickel and said nickel oxide is 40% to 70% by weight based on said catalyst, said catalyst having a total BET surface area of 80 to 200 m2/g and a total pore volume, determined by mercury porosimetry, of 0,35 to 0.6 ml/g, said total volume consisting of 30% to 60% of said volume from pores having pore