5629256

CATALYST SYSTEM FOR THE SYNTHESIS OF RUBBERY POLYMERS

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The subject invention relates to an anionic polymerization technique for synthesizing rubbery polymers of conjugated diolefin monomers, such as rubbery copolymer of alpha-methylstyrene and 1,3-butadiene. These rubbery copolymers exhibit an excellent combination of properties for utilization in tire tread rubber compounds. They have high trans-isomer contents which leads to good treadwear characteristics and a broad molecular weight distribution which enhances processability. This invention more specifically discloses a process for the synthesis of rubbery polymers which have a broad molecular weight distribution and which are particularly useful in tire tread rubber compounds, said process comprising the polymerization of at least one conjugated diolefin monomer in an organic solvent in the presence of a catalyst system which is comprised of (a) a dialkyl magnesium compound and (b) an alkali metal containing compound selected from the group consisting of alkali metal alkoxides, alkali metal phenoxides, alkali metal sulfoxides,alkali metal sulfonates, alkali metal carboxylates, alkyl substituted alkali metal phenoxides, alkali metal alkylamines, and alkali metal dialkylamines; wherein the molar ratio of the alkali metal containing compound to the dialkyl magnesium compound is within the range of about 6:1 to about 1:5. In cases where rubbery copolymers containing alpha-methylstyrene are being synthesized the alkali metal in the alkali metal containing compound will normally be potassium, rubidium, or cesium with cesium being most preferred.

5629405

METHOD FOR MAKING POLYARYLENE ETHERS WITH PYRIDINE CATALYSTS

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A method for making polyarylene ethers is described and the method comprises the step of polymerizing hydroxyaromatic monomers or oligomers prepared therefrom in the presence of pyridine catalysts.

FINE CHEMICALS

5599963

CATALYSTS FOR PRODUCTION OF BETA-HYDROXY CARBONYL COMPOUNDS

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The invention relates to catalysts for the synthesis of beta-hydroxy carbonyl compounds, and in particular to enantioselective catalysts.

5599999

PROCESS FOR PREPARATION FOR ALKANOLAMINE, CATALYST USED IN THE PROCESS AND PROCESS FOR PREPARATION OF THE CATALYST

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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

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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

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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

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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