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VERY ACTIVE ALUMINUM CATALYSTS IN GLYCIDYL METHACRYLATE RING OPENING POLYMERIZATION, FOR APPLICATIONS IN ELECTRONIC DEVICES


Patent

ES2610432 A1

Code

QUI_UAH_08

Application areas

- Information and Communication Technologies, Electronic 
- Biological Sciences, Chemistry

Type of Collaboration

- Technical cooperation
- Commercial agreement with technical assistance
- License agreement

Main Researchers

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CONTACT



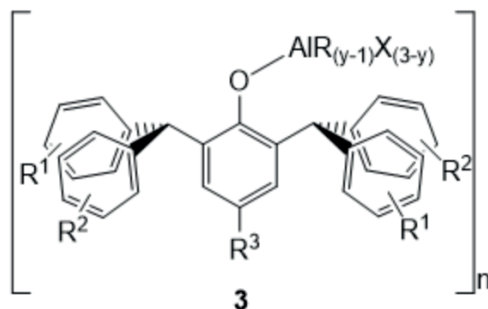
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R^1 y R^2 = H, alkyl, haloalkyl, alkoxide, dialkylamine, halodialkylamine, hydroxyalkyl or nitrile
 R^3 = H, alkyl, haloalkyl, cyanoalkyl, alkoxide, dialkylamine or nitrile
 R = H, alkyl, alkenyl, alkynyl, aryl or alkoxide
 X = halide.

General scheme of the aluminum catalysts type (3) used for the glycidyl methacrylate Ring Opening Polymerization processes described

ABSTRACT

This involves the synthesis of aluminum compounds of type (3) and the applications that these compounds have as catalysts in the ROP polymerization of glycidyl methacrylate in the absence of initiators or cocatalysts at room temperature and in short periods of time.

The compounds to which this invention refers can have different isomers or can be solvated or in the form of salts.

The glycidyl methacrylate ring opening polymerization processes are carried out in the presence of an aluminum catalyst of type (3) using an apolar medium, such as toluene as the solvent. The process is carried out at atmospheric pressure and room temperature.

This polymerization process shows a series of important advantages.

ADVANTAGES AND INNOVATIONS

- Catalysts are resistant to degradation under catalysis conditions
- They are carried out at room temperature and at atmospheric pressure
- The use of initiators or cocatalysts is not required for the polymerization process to take place
- Conversions are elevated to short polymerization times
- The procedure is simple, efficient and cheap, since the compound that would represent the greatest cost, the catalyst, is used in a very low proportion..