

[54] **POLYURETHANE POLYMERS
CHARACTERIZED BY CARBOXYLATE
GROUPS AND HYDROXYL GROUPS IN THE
POLYMER BACKBONE**

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subsequent to May 22, 1996, has been
disclaimed.

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Related U.S. Application Data

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1977, Pat. No. 4,156,067, which is a continuation-in-
part of Ser. No. 809,260, Jun. 23, 1977, Pat. No.
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528/65; 528/71; 528/73; 528/76; 528/80;
528/84; 128/82; 128/155; 128/132 D

[58] Field of Search 528/59, 65, 71, 73,
528/76, 80, 84, 44; 128/82, 132 D, 155

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[57] **ABSTRACT**

Water insoluble polyurethane polyether polymers that are soluble in ethanol at pH 11 characterized by a molecular weight above 6,000 and having carboxylate groups and hydroxyl groups in the polymer backbone are prepared by reacting a mixture of polyols, a polyfunctional lactone and a polyfunctional isocyanate proportioned so as to provide the desired polymer properties. The polymer so prepared contains lactone groups and hydroxyl groups in the polymer backbone. The lactone ring is opened by treating the polymer with an alkaline aqueous solution of a water miscible organic solvent to produce a water insoluble polyurethane polyether resin containing carboxylate groups and hydroxyl groups in the polymer backbone. The carboxylate groups may be in the form of a carboxylic acid group or its alkali metal or quaternary ammonium salt. The product is soluble in mixtures of water with a water miscible organic solvent and may be used in the preparation of surgical drapes and burn dressings.

12 Claims, No Drawings