

## Abstract

### Hydroxy-functional polyurethane-polyureas and their use as dispersants

- 5 Water-dispersible polyurethane-polyureas are obtainable by reaction of:
- a) a polyisocyanate component, consisting of at least one organic polyisocyanate, with
  - b) at least one isocyanate-reactive polyesterpolyol  
10 which can be prepared from
    - i one or more dicarboxylic acids
    - ii one or more diols and
    - 15 iii if desired, one or more polyfunctional components whose functional groups are selected from hydroxyl and carboxyl groups, and
    - iv if desired, a monofunctional carboxylic acid,
  - c) if desired, an isocyanate-reactive fatty acid  
20 derivative,
  - d) if desired, a compound of relatively high functionality (functionality greater than 2) whose functional groups are selected from hydroxyl and carboxyl groups, and
  - 25 e) a polyalkylene glycol component having a molar mass of from 750 to 10,000 g/mol and
  - f) a compound which contains active hydrogen atoms and in which the active hydrogen reacts with the NCO groups more quickly than water,
- 30 while maintaining a ratio of the number of isocyanate groups to the number of isocyanate-reactive hydrogen

atoms, based on all of the starting components a) to f),  
of from 0.6:1 to 1:1, wherein the proportion by mass of  
polyester-derived structural units in the polyurethane-  
polyurea is from 10 to 60% and the proportion by mass of  
5 polyalkylene glycol-derived structural units is from 25  
to 75%.