

A B S T R A C T

POLYMER POLYOL AND PROCESS FOR THE
PREPARATION OF POLYMER POLYOLS

Process for the preparation of a stable polymer polyol having a narrow polymer particle size distribution comprising the steps of:

- (a) preparing a polymer seed dispersion wherein the liquid polyol medium comprises at least 30% by weight of a coupled polyol;
- (b) admixing a base polyol and one or more ethylenically unsaturated monomers, at least 80% by weight of which is styrene, with at least part of the polymer seed dispersion obtained in step (a) at a temperature below the polymerization temperature; and subsequently
- (c) heating the resulting mixture to a temperature at which polymerization occurs and allowing the polymerization to proceed until completion, thus yielding the polymer polyol.

Polymer polyol comprising a liquid polyol phase and from 10 to 55% by weight based on total weight of polymer polyol of solid polymer particles stably dispersed therein, wherein the polymer particles consist essentially of polystyrene and have a mean particle size in the range of from 0.5 to 2.5 micron with a particle size span of at most 1.3.

The above polymer polyols are very useful in the production of polyurethane articles, particularly polyurethane foams.