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ABSTRACT

MULTILAYERED MICROPOROUS FOAM DRESSING AND METHOD FOR MANUFACTURING THE SAME

Disclosed is a multilayered microporous foam dressing 1-7 mm thick, having a three-ply structure consisting of an outer protective film layer 10-90 μm thick, an intermediate absorbent foam layer containing numerous open cells with an average diameter of 80-400 μm , and a wound-contacting layer 0.1-200 μm thick with numerous pores having an average diameter of 60 μm . A method for preparing the dressing is also disclosed. 40-75 wt% of a polyurethane prepolymer, 15-45 wt% of a foaming agent, 5-35 wt% of a crosslinking agent, and 0.5-15 wt% of additives, including a surfactant, a humectant, a releasing agent, antibacterial agents, dyes, cell growth factors, etc., are mixed by stirring, and the mixture is injected into a mold coated with the outer protective film layer and allowed to be expanded therein. While being maintained at mold temperature of 30-60 °C, the mold is opened 5-10 min after the injection. With this structure, the dressing shows high moisture permeability, high absorptivity, and low wound adherence, as well as defending against the infiltration of bacteria and impurities.

FIGURE 1



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