
Water-resistant degradable foam and method of making the same

Abstract

A foam that is the extrudate of a mixture of a biodegradable polymer, starch, talc, and a blowing agent is provided. This foam is made by extruding a mixture of the above-listed components. This foam is water-resistant and in some variations waterproof making it an effective packing material. Still further, this foam is biodegradable, and thus, it can be disposed without creating environmental waste. In addition, the foam may be extruded into sheets and then thermoformed to form various articles.

Inventors: **Biby; Gerald** (Omaha, NE); **Hanna; Milford** (Lincoln, NE); **Fang; Qi** (Lincoln, NE)

Assignee: **Board of Regents of University of Nebraska** (Lincoln, NE)

Appl. No.: **305937**

Filed: **May 6, 1999**

SUMMARY OF THE INVENTION

It is a primary object of the present invention to provide a foam that is biodegradable so that it can be disposed without creating environmental waste but which is also water-resistant so that it can be used as a packing material.

According to the present invention, the foregoing and other objects are achieved by a foam that is the extrudate of a mixture that includes a biodegradable polymer, starch, talc, and a blowing agent. This foam is biodegradable and water-resistant. Another aspect of this invention is a process for making this foam by extruding a mixture of a biodegradable polymer, starch, talc, and a blowing agent through a heated extruder and allowing a foam to form as the mixture exits the extruder.

Additional objects, advantages and novel features of the invention will be set forth in part in the description which follows, and in part will become apparent to those skilled in the art upon examination of the following, or may be learned from practice of the invention.

The objects and advantages of the invention may be realized and attained by means of the instrumentalities and combinations particularly pointed out in the appended claims.