

614-694 g/m<sup>2</sup>/24 h (i.e. 600-700, nearest round numbers). These vapor permeabilities are not affected significantly by sprinkle-coating with EVA, average thickness 20-40  $\mu$ m. The water vapor permeabilities of the best prior art materials previously tested were twice as high, namely:

paper sachets: 1270 g/m<sup>2</sup>/24 h

polyester wet fleece: 1251 g/m<sup>2</sup>/24 h

polyolefin wet fleece: 1260 g/m<sup>2</sup>/24 h

The tear strengths of those suitable commercial polyolefin fleece materials having a thickness of 0.14 to 0.25 mm (average) range from 4.6 to 11.6N/mm in all directions, all but one of these materials being higher than 5. This is to be contrasted against the best prior art paper sachets, namely 4.1N/mm and the above prior art fleeces, namely 2-2.5N/mm.

Even more important are the onward-tearing (resistance to tear propagation) properties which are vastly superior in the case of the spunbonded polyolefin fleeces, as compared with the prior art materials.

What we claim is:

1. Applicator device for releasing at a controlled rate a gaseous pest-control medium to an environment comprising a container for holding a pest-control agent formed at least in part of a water vapor permeable plastic fleece material which is substantially impervious to pressure-less liquid water and has a water vapor permeability of not more than 1000 g/m<sup>2</sup>/24 h.

2. Applicator device as claimed in claim 1, wherein the water vapor permeability is 300 to 1000 g/m<sup>2</sup>/24 h.

3. Applicator device as claimed in claim 2, wherein the water vapor permeability is 500 to 750 g/m<sup>2</sup>/24 h.

4. Applicator device as claimed in claim 1, wherein the fleece material is a spun-bonded synthetic paper fleece composed of heat and pressure bonded minute polyolefin fibers and has a tensile strength of not less than 4.6N/mm (ASTM D 823-60).

5. Applicator device as claimed in claim 4, containing a hydrolyzable metal phosphide.

6. A method of disinfecting commodities, buildings, packaging means, transport vehicles or shipholds or transport containers which comprises releasing phosphine gas there into from an applicator means as claimed in claim 5 and maintaining a pesticidal concentration of the released phosphine gas therein for a period effective to achieved disinfection.

7. Applicator as claimed in claim 4, wherein the agent comprises at least one of aluminum phosphide, magnesium phosphide, calcium phosphide.

8. Applicator as claimed in claim 7, wherein the agent is technical aluminum phosphide or technical magnesium phosphide or a mixture of these phosphides, substantially free of additives or containing not more than a hydrophobising amount of a hydrophobising agent.

9. Applicator as claimed in claim 4, packed for storage and transport in a gas- and moisture-proof container.

10. Applicator as claimed in claim 1, wherein the fleece material is a heat weldable plastic sheet material comprising a spun-bonded, polyolefin sheet or fleece which is composed of heat and pressure bonded minute polyolefin fibers and which is vapor- and gas-pervious but impervious to liquid water and dust, naturally water-resistant and of high tensile and tear strength, coated at least in areas and on a side to be heat-welded with a thermoplastic highly porous heat welding bonding layer having a melting point or region sufficiently lower than that of the polyolefin fibers that conventional

welding with heat and pressure results in a welding seam before the fibers reach their melting point so that the physical properties of the polyolefin fibers are substantially retained.

11. Applicator as claimed in claim 10, wherein the whole of one side thereof is thus coated and wherein the permeability to gas and moisture of the bonding layer is of an order of magnitude substantially higher than that of the polyolefin sheet.

12. Applicator as claimed in claim 10, wherein the difference in melting points or melting regions between the polyolefin fibers and the bonding layer is more than 20° C.

13. Applicator as claimed in claim 12, wherein the difference is from 30°-80° C.

14. Applicator as claimed in claim 12, wherein the difference is from 40° to 70° C.

15. Applicator as claimed in claim 12, wherein the difference is from 50° to 60° C.

16. Applicator as claimed in claim 10, wherein the polyolefin sheet is made from 100% high density polyethylene fibers by an integrated spinning and bonding process, formed by spinning very fine polyethylene fibers, each approximately 0.005 mm in diameter and laying the fibers down as a random network, and then bonding the fibers together with heat and pressure.

17. Applicator as claimed in claim 16, wherein the melting point or region of the polyolefin sheet is in the region of 135° C.

18. Applicator as claimed in claim 10, wherein the bonding layer is formed by sprinkling a bonding substance in powder form onto a supporting surface and fusing the substance onto that surface so that a high porosity is retained.

19. Applicator as claimed in claim 18, wherein the bonding substance is sprinkle-coated directly onto the polyolefin sheet followed by fusing at a temperature below the melting point or melting region of the fibers of the sheet.

20. Applicator as claimed in claim 18 wherein the bonding layer is applied by reverse coating.

21. Applicator as claimed in claim 10, wherein the amount of the bonding layer is 10 to 50 g/m<sup>2</sup>.

22. Applicator as claimed in claim 10, wherein the amount of the bonding layer is 15 to 40 g/m<sup>2</sup>.

23. Applicator as claimed in claim 10, wherein the bonding substance is ethylene vinyl acetate.

24. Applicator as claimed in claim 10, wherein the bonding substance is polyethylene.

25. Applicator as claimed in claim 1 for holding a gas-evolving or vapor-evolving pest control agent or substance, comprising sachets or pockets formed from and having seams produced by thermal welding sheet material comprising at least one layer or portion of a layer of the fleece material.

26. Applicator as claimed in claim 1 in the form of individual sachets or of bag blankets.

27. Applicator as claimed in claim 1, wherein the rate of gas or vapor-release therefrom is further determined by the available gas-pervious surface area of the sheet material per unit of composition enclosed in the applicator means.

28. Applicator as claimed in claim 27, wherein the available gas-pervious surface area is determined by the applicator being formed partly of the sheet material and the remainder of a different but compatible sheet material having little or no gas and vapor permeability.