MOISTURE IMPERVIOUS ABSORBENT SHEET FOR COVERING WORK SURFACES IN CHEMICAL LABORATORIES AND THE LIKE

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1. The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

The present invention pertains to the art of protective fabrics, for use particularly in chemical laboratories and the like to protect furniture from being damaged by destructive materials.

The invention comprises a laminated sheet, embodying an exposed lamina or layer of highly absorbent material and a backing lamina or layer of impervious material. In particular the invention comprises a laminated sheet embodying an exposed layer of blotting paper, a backing layer of metal foil permanently cemented to the blotting paper and a coating of pressure-responsive adhesive on the surface of the sheet opposite the exposed surface of blotting paper.

In the use of furniture in chemical laboratories, damage is frequently caused to the furniture by contact with liquid chemicals spilled thereon that attack the furniture surfaces. Also the presence of spilled liquids, including those that are not chemically active in contact with the furniture surface, is undesirable because the furniture surface is nonabsorbent. Such liquid must therefore be wiped away from the furniture, and this involves wasteful expenditure of time on the part of laboratory personnel. In laboratory use of radioactive materials, spilling of liquid radioactive materials on furniture surfaces necessitates immediate cleaning up of the radioactive liquid, and subsequent decontamination of the furniture surface by acid treatment in case of stainless steel furniture, or by discarding and replacing the furniture in the case of it containing such materials as "Transite" or "Masonite."

Laminated sheet embodying the present invention is placed on the work surface of a piece of furniture, in a laboratory, for example, and is adhered thereto by means of the coating of pressure-responsive adhesive. The furniture is protected thereby from being damaged or destroyed by chemicals that are spilled. Spilled liquid is absorbed by the blotting paper which constitutes the exposed surface of the protective covering, and is thereby prevented from flowing and pouring over the edge of the work surface. The lamina of metal in backing relationship to the blotting paper prevents the liquid from penetrating through to the work surface. When a protective sheet becomes soiled, it is easily removable to be discarded by stripping it from the work surface, and the protective sheet of the present invention constitutes temporary covering that is readily replaceable.

For a more comprehensive understanding of the principles of the invention, and for disclosure of one practical structure thereof, attention is directed to the accompanying drawing, in which the single figure is a schematic view in perspective of a practical embodiment of the invention.

In the drawing, 11 represents a piece of furniture embodying a work surface 12. The laminated sheet 13 comprises an exposed lamina or layer 14 of highly absorbent material, blotting paper being suitable for the purpose. An impervious lamina or layer 15, which may be lead foil, aluminum foil or any other suitable metal foil, is positioned to back the blotting paper 14 and is bonded thereto, for example, by means of a coating 17 of pressure-responsive cement formed of a conventional composition that can be applied in liquid or paste form and is set to form a permanent bond. The exposed surface of impervious layer 15, that is, the surface of sheet 13 that is remote from the absorbent material 14, is coated, for example, with pressure-sensitive adhesive 17 of any suitable conventional type, for example, of the type used on masking tape.

Absorbent layer 14 and impervious layer 15 are laminated together by means of a cement 16 using conventional lamination methods. The laminated sheet 13 is prepared in roll or sheet form. The coating 17 of pressure-responsive cement is applied using conventional methods. The patent to Eustis et al. No. 2,385,319 discloses a suitable process for applying pressure-responsive adhesive to a laminated sheet or strip, which may be similarly employed in the practice of the present invention.

In use, the laminated sheet 13 is applied to the work surface 12 to be protected, with the pressure-responsive cement 17 in contact with surface 12, and with the absorbent layer 14 exposed. Liquid spilled upon the laminated sheet 13 is absorbed by the blotting paper 14, and is thereby prevented from flowing and pouring over the edge of furniture 11. The metal backing 15 prevents penetration of the liquid through sheet 13 to the surface 12.

For chemical laboratory work involving use of radioactive materials, it is preferred to use a sheet 13 in which the backing 15 for the blotting paper 10 is metal lead, which is impervious to radioactive substances.

A soiled sheet 13 may be removed from the furniture 11 and discarded by stripping the sheet.
off of the surface 12 along the temporary bond
of the pressure-responsive adhesive 17.

The disclosed structure is one practical em-
bodyment of the invention, which is not limited
to the specific structure that is shown and de-
scribed.

1. claim:

1. In a laminated sheet, a lamina of blotting
paper forming one face of the sheet, a lamina of
metal foil backing the blotting paper and bonded
thereto, a coating of pressure-sensitive adhesive
on the face of the laminated sheet that is op-
posite the blotting paper.

2. In a laminated sheet as defined in claim 1,
the metal foil constituting lead foil.

3. In a laminated sheet as defined in claim 1,
the metal foil constituting aluminum foil.

4. In combination, a piece of furniture com-
prising a work surface and a protective sheet
therefor, the protective sheet comprising a lamina
of blotting paper forming one face of the sheet, a
lamina of metal foil backing the blotting paper
and bonded thereto, a coating of pressure-respon-
sive adhesive on the face of the protective sheet
that is opposite the blotting paper, the protective
sheet being adhered to the work surface of the
furniture by means of the pressure-responsive ad-
hesive.

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