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NASA TECH BRIEF

New Type of Nonflammable Paper

An improved nonflammable paper is made from fibers of chrysotile asbestos, beta-glass fibers, glass microfibers, and a little nonflammable organic binder. The combination of lengths of fibers is significant. The paper is designed to replace combustible cellulose writing and offset-printing papers; it does not propagate flame in an atmosphere of 16.5-psig oxygen.

Addition of chopped polybenzimidazole fibers to this base improved the tear strength but caused undesirable mottling of the surface. All of several organic binders (fluorocarbons and a carboxynitrosorubber) tested produced papers better than compositions lacking binders. A paper wholly based on inorganic nonflammable materials had better tensile and tear properties than had any earlier papers having similar bases.

Earlier papers composed of nonflammable inorganic fibers were too weak and lacked sufficient tear strength and crease resistance. Conventionally flame-proofed cellulose papers could not pass the flammability test in 16-psig oxygen.

The successful paper is suitable for any application requiring a nonflammable paper that resists rot and mold; moreover it may be used as a catalyst support or for special gaskets. The paper may excel in environments detrimental to cellulose papers, in disposable draperies, as a wrapping material, and for stored documents.

Note:

The following documentation may be obtained from:

Clearinghouse for Federal Scientific
and Technical Information
Springfield, Virginia 22151
Single document price $3.00
(or microfiche $0.65)

Reference:
NASA-CR-101977 (N70-10026), Nonflammable Paper Composition

Patent status:

No patent action is contemplated by NASA.

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