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USP-4,348,306

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|-------------------------------|--------------------------------|--------------------|----------------------------------|------|--------------------------|---------------|
| " F/RP#71 USP-3,974,310 | Brominated cyclic compounds | Liquid | Polyester | 4-10 | FF3-71, FF5-76, MVSS-302 | \$1.65 T/L |
| " P-95 | Sb ₂ O ₃ | Aqueous dispersion | Jute, PVC compounding and others | 5-20 | N.A. | \$1.65 T/L |

Witco Chemical Corp.
Pearsall Chemical Division
 Houston, Tx. 77001

| | | | | | | |
|-------------------------|-----------------------|--------|-------------------------------|-------|----------------------|-----------|
| Pearsall CPF, Flexchlor | Chlorinated paraffins | Liquid | Carpet Backing | 10-30 | ASTM D-2859 | .515-.585 |
| Fyarestor 100 | Bromochloro-paraffin | Liquid | Cotton, cotton/polyester | 20-40 | CPAI 84 | .73 |
| " 102 | Bromochloro-paraffin | Liquid | Polyester | 5-10 | NFPA-702 | .73 |
| " 330 | Bromine-phosphorus | Liquid | Rayon, polyester (non-wovens) | 8-25 | UL-900 | .46 |
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boxyl groups via co-polymerization of methacrylic acid using gamma irradiation from a Co⁶⁰ source.⁵ The irradiated fabrics, wherein free radicals were generated by gamma irradiation, were immersed in a methanol/water solution containing methacrylic acid. Attempts to introduce carboxyl groups via solid state polymerization of methacrylic acid were partly successful. The results of carboxyl group determination of the modified fabrics given in Tables III and IV indicate that very few carboxyl groups were introduced into the cotton and consequently the modified fabrics showed poor soil release properties (Tables IV and V).

Another approach to introduce

carboxyl groups into cotton cellulose is through saponification of amide groups of the polyacrylamide grafted cotton fabrics.⁶ Table VII gives nitrogen contents and breaking strengths of the fabrics which had been treated with an aqueous solution of acrylamide by pad/dry process and irradiated with an electron beam. The irradiated fabrics retained 52 to 66% of the nitrogen after washing. The results of nitrogen and breaking strengths suggest that 2 megarad of radiation using an electron beam were sufficient for polymerization of acrylamide. The results of carboxyl content determinations after alkaline hydrolysis of polyacrylamide-grafted cotton fabrics are shown in Table VII, and the soiling and soil removal properties of the modified fabrics having amide/carboxyl groups are given in Table VIII.

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