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creating solutions ... *shaping the future*

## **CONVERTING RECLAIMED SCRAP PET TO USEFUL PROCESS CHEMICALS**

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EvCo Research specializes in using reclaimed polyethylene terephthalate (PET or RPET) as raw materials in the manufacture of industrial process chemicals for the paper, textile, and wood products industries. EvCo has recently patented and commercialized a series of internal wet-strength and anti-wicking binders, used in paper and paperboard manufacturing, which are applied by simple addition to the pulp fiber dispersion (furnish) that feeds the paper machine (from the head box).

These products have proven to substitute for fluorocarbon chemicals that have provided these properties, but which are being removed from industrial markets owing to health and safety issues. They also substitute other synthetic or natural substituted resins in many applications.

In addition to their value in providing improved anti-wicking and strength properties to paper and paperboard on a cost competitive basis, they also offer the following advantages:

- ❖ They impart total recyclability to the treated paper or paperboard (whereas conventionally treated paper and paperboard is more often nonrecyclable)
- ❖ They are made using scrap, reclaimed MSW PET (or RPET) as the principal raw material
- ❖ They are nontoxic, create no byproducts, and are fully FDA complied
- ❖ They are added without additional equipment or manufacturing process changes
- ❖ They are readily compostable, having been cross-reacted with vegetable oil derivatives

When used in combination with conventional wet strength chemicals including ADA, AKD, and Kymene, they reverse the nonrecyclable nature of paper and paperboard traditionally imparted by these additives, and even in small pulp stock additions, they impart easy recyclability.

These products are presently being used in commercially produced papers by Brown packaging, Bay State, and Boise Cascade, and in linerboard, medium and corrugated board by Independent Corrugators, Norampac, and Smurfit-Stone Container. Trials are underway with several other major paper companies but we are restricted by developmental partnership agreements that presently limit the disclosure of this work.

There will be no greater use or application for reclaimed bottle or fiber grade PET (RPET) during the coming year. The applications to which these products are being applied constitute markets for millions of pounds of the EvCo materials.

These products are already being used in butcher and sandwich wraps, fast food bags and other paper bags, pizza cartons, cake boxes, donut trays, fast food sleeves and trays and the like, perishable food boxes - - - corrugated or paperboard, live plant shipping packages

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