



## HISTORY

The use of solvent-based printing inks and coatings was universal in the wallcovering industry until recent years. Solvent-based inks and coatings would dry quickly with little or no additional heat added. This fast drying allowed for faster manufacturing speeds. The solvent-based products also provided good print quality and adhesion to the vinyl surface at a low cost. The industry accepted the negatives of solvent flammability and the need to control environmental exposure to the work force.

Scientific evidence showed the negative impact to the environment of emitting Volatile Organic Compounds (voc's) into the atmosphere. The EPA, through the Clean Air Act, mandated the reduction of these emissions, initially in states where the concentration of industrial manufacturing was heavier. The early requirements of emission limits for pounds of VOC per gallon of coating (minus water) were established. A manufacturer was allowed to apply for a variance permit to treat the whole plant as a single source. This was known as the "bubble concept". This allowed one piece of equipment to convert to 100% waterbase, a second to 50% and a third to remain 0%. This combination achieved the emissions reduction targeted.

The EPA then issued its Hazardous Air Pollutants (HAP's) list, along with the Title V reporting requirements. Listed among these HAP's were the most common organic solvents used in the wallcovering printing process. Manufacturers had to decide the method of compliance that best met current and future goals.

## METHODS USED TO CONTROL EMISSIONS AT MANUFACTURING SOURCE

**Solvent Recovery** – This is where organic solvent vapors are collected and, through a condensing operation converted back to a liquid for use or sale.

**Incineration** – An operation where the organic emissions are incinerated in a catalytic process thereby reducing emissions to acceptable levels.

**Waterbased Ink Conversion** – The printing inks and coatings are converted from organic solvent-based (high VOC) to waterbased systems.

## ADVANTAGES OF KOROSEAL WALLCOVERINGS WATERBASED INK & COATINGS

- **Compliance** with all regulations on VOC emissions during manufacturing.
- **Fire Safety** during manufacturing – Elimination of the storage of flammable solvents.
- **Reduction** in employee exposure to organic solvents.
- **Indoor Air Quality** – Printing involves a drying process where the solvents or water are either driven off or remain as residual amounts in the wallcovering. The solvent-based systems commonly use MEK, MIBK, and/or Toluene. These are all listed on the EPA HAP's list Wallcoverings manufactured with these in the inks and coatings will retain residual amounts, which, after installation, may pass into the indoor air environment (off gassing). Some types of coatings used by wallcovering manufacturers contain formaldehyde. Printing inks and coatings are manufactured without the use of an HAPlisted solvent, including formaldehyde.
- **Excellent Printing Quality** – The waterbased printing inks give excellent print quality and closely match that of solvent based inks. A full spectrum of waterbased color pigments was developed to provide the variety of color required to meet the ever changing market requirements.
- **Cadmium Elimination:** There are no cadmium-containing pigments used in the coloration of the wallcoverings.
- **Koroklear™ Coatings** were designed to provide uniform luster, cleanability and stain resistance and to meet all industry performance criteria. It can be cleaned with a standard household cleaner. (See Maintenance Instructions.)

The wallcoverings' printing inks and coatings are designed to be ENVIRONMENTALLY FRIENDLY while meeting the highest performance criteria.