A PERIODIC PUBLICATION HIGHLIGHTING THE MERITS OF VINYL PERFORMANCE PRODUCTS

FOCUS on Sustainability

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FOCUS ON SUSTAINABILITY

Sustainability is an important facet of environmental responsibility and, for vinyl coated fabrics, the opportunities available to accomplish this goal include:

Selection and sourcing with renewable raw materials

Processing stewardship, including conservation of energy and process water

Processing waste is minimalized through efficient processing methodologies

Recycling of in-house scrap including trim and waste streams

THE HAZARDOUS NATURE OF SOME RAW MATERIALS IS RECOGNIZED TODAY AND FORMULATED APPROPRIATELY WITH THE REMOVAL OF:

- Vinyl chloride monomer (VCM) traces from the PVC polymer. Mercury, as an incidental byproduct of the electrolytic method to producing chlorine for PVC. (Mercury was until recently even used in amalgam for dental fillings.)
- Heavy metals that were used in pigments and stabilizers including lead, chromium and mercury.
- Certain ortho-phthalate and phosphate-based fire-retardant plasticizers.
- Certain foaming agents for expanded vinyl.
- Reduction in the use of solvent-based topcoats.

NEWER, MORE ENVIRONMENTALLY FRIENDLY AND OFTEN MORE SUSTAINABLE RAW MATERIALS HAVE BEEN DEVELOPED TO REPLACE THOSE CHEMICALS, INCLUDING:

- Non-phthalate plasticizers
- Organic and innocuous iron oxide pigments
- Innovative stabilizer systems
- Water-based top finishes with improved resistance to wear, flexibility and haptics.

And, as older facilities are replaced or upgraded, process water is recycled and energy use is significantly reduced with modern equipment and eliminating wasted energy. In one case study, a local fuel shortage caused a town to reduce a coated fabric facility's gas supply by half, yet it did not affect product output in any way once management identified and corrected sources of heat loss.

TODAY'S PVC RESIN

Today's PVC resin has the lowest carbon content of any other carbon-based plastic, as less than half the vinyl chloride molecule is hydrocarbon.

A group of healthcare professionals met in Baltimore in June of 2017 to discuss early and massive furniture failures that occurred when they were forced to substitute urethane coated fabrics as many designers de-selected vinyl upholstery because of the chlorine content. This huge financial impact led to the formation of the Durable Coated Finishes+ Task Force (now affiliated with the American Academy of Healthcare Interior Designers) which has become a strong advocate for vinyl coated fabrics due to their reliability, cost-effectiveness, and long service life.

While there are a number of proven methods to recycle post-consumer coated fabrics, the challenge is to find a way to amass a sufficient amount to make it economically feasible. The vinyl roofing and wallcovering industries have been quite successful, recycling millions of pounds because it is much easier to accumulate.

SOME OF VINYL'S SUSTAINABILITY FEATURES

Durability: Vinyl coated fabrics have a long expected service life, requiring replacement less often.

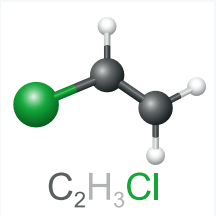
Safe Disposal: They will not decompose in landfills, which are often lined with vinyl sheeting to prevent groundwater seepage. They can be safely incinerated, and the energy recaptured and reused.

Cleaning and Disinfectin: Firm, lightly textured, non-porous surfaces can withstand frequent applications of manufacturer approved treatments. (Although rinsing after application is highly recommended.)

Recycling: 99% of manufacturing waste is reprocessed or recycled.

MORE ON SUSTAINABILITY

Unlike other carbon-based polymers, the vinyl chloride molecule is composed of more than 50% chlorine from the electrolysis of salt water that produces valuable caustic soda as well. And modern electrolytic methods do not produce mercury, once a major concern for the process. Carbon feedstocks in the U.S. come from natural gas, although coal is still unfortunately used as a source in China.



Vinyl Chloride

Chlorine is a vital component for many important chemicals, disinfecting 98% of the U.S. drinking water supply, and is found in 85% of all pharmaceuticals.

Tightly bound in the PVC molecule, PVC does not emit chlorine.

While the PVC molecule does not support combustion, the total specific formulation determines flammability.

Vinyl coated fabrics do not melt or drip hot wax when burned.

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