FAQs: The Truth About Vinyl

What is vinyl?

Vinyl is polyvinyl chloride or PVC, a special type of plastic. Like all plastic materials, vinyl is made from hydrocarbons (usually natural gas). But, unlike other plastics, vinyl is even more derived from common salt, so less fossil fuel is required to make vinyl than to make most other plastics. Depending on which additional ingredients are added, vinyl can be made rigid, flexible or even semi-liquid; clear or colorful; brick thick or film thin.

Which industries and products use vinyl?

Here is a detailed – but by no means exhaustive – list of major applications of vinyl:

- Medical
  - Blood bags
  - IV containers
  - Tubing
  - Sanitary physician clothing (gloves, hats, etc.)

- Consumer
  - Shower curtains
  - Toys (approved by the CPSC)
  - Automotive interiors
  - Furniture upholstery

- Building
  - Piping for drinking water (approved by the ANSI/NSF)
  - Siding for homes
  - Electrical wire insulation (approval under the National Electrical Code of the NFPA)
  - Windows
  - Floor and wall coverings
  - Fencing, decking and railing

- Packaging
  - Blister pack
  - Film
  - Bottles

Are products containing vinyl or PVC safe for human health?

Yes. Vinyl has been extensively tested and used for decades, and numerous government agencies have examined and confirmed its safety. Vinyl manufacturing plants are designed, regulated and operated to protect workers and plant communities.

Which government agencies and certifying bodies approve the use of vinyl or vinyl components?

These groups include:

- U.S. Food and Drug Administration (FDA)
- U.S. Consumer Product Safety Commission (CPSC)
- National Fire Protection Association
- American National Standards Institute/National Sanitation Foundation
- European Commission

- Florida Solar Energy Center

Are products containing vinyl or PVC safe for the environment?

Yes. Recent studies have shown that vinyl products are as safe and environmentally acceptable throughout their life (from extraction of materials to recycling/disposal) as other commonly used materials – and, in fact, can be better than some alternatives. Most recently, the European Commission concluded a comprehensive review of 250 life-cycle assessments of PVC and competing materials. The Commission found that vinyl products offer environmental benefits equal to or better than those of other materials.

The manufacture of vinyl uses as little as one-third the energy of alternative materials. In packaging alone, vinyl saves the equivalent of 2 million barrels of oil per year compared to a common, competing material. Its manufacture also releases less carbon dioxide (a greenhouse gas) than many competing materials. Almost all the scrap generated in the manufacture of vinyl products is recycled back into the next production run.

Are consumers – both adults and children – safe from chemical exposure when using products that contain vinyl?

Yes.

Toys - Vinyl toys have been reviewed for safety by the U.S. Consumer Product Safety Commission (CPSC), the main U.S. government agency charged with monitoring the safety of consumer products. In 2003, after a thorough review, CPSC found “no demonstrated health risk from using PVC toys.” The evaluation included a review of the safety of DINP, the main plasticizer used to make soft vinyl toys. CPSC concluded that "few, if any children, are at risk" of injury from chewing on toys that contain DINP.

Shower curtains and new cars -In decades of use by hundreds of millions of people worldwide, there is no evidence of human harm from vinyl in new car interiors or shower curtains.

What is DEHP and is it safe?
DEHP is a plasticizer used in various types of flexible vinyl products, including critical-care medical products. DEHP allows vinyl to be softened and shaped into many designs without cracking or leaking. It has been studied extensively by industry, government and third-party scientists and has been accepted as a safe and important plasticizer in medical and consumer products for decades.
Examples of recent findings:

- The U.S. Food and Drug Administration found that most patients have minimal risk from exposure to DEHP and added that, "The risk of not doing a needed procedure is far greater than the risk associated with exposure to DEHP."
- The European Commission’s Scientific Committee on Medicinal Products and Medical Devices stated that “there are no reports concerning any adverse effects in humans following exposure to DEHP-PVC” and concludes that “at this moment no specific recommendations can be made to limit the use of DEHP in any particular patient group.” (October 2002)

Plasticizers are not used in rigid vinyl products such as pipe, siding and rigid packaging.

Is the disposal of vinyl safe?

Yes. Most vinyl products last a long time, but when they reach the end of their useful lives, they can be managed the same as other consumer products, through disposal or recycling. Because they last a long time (conserving resources) in products such as pipe, siding, windows, flooring and others, not much may be available for either recycling or disposal. Nevertheless, millions of pounds of post-consumer vinyl is being recycled annually, according to a report conducted for the Vinyl Institute.

Vinyl does not present unique issues in landfill or incineration. Vinyl makes up less than 0.5% of municipal waste by weight.

Dioxin is produced by almost anything that burns – from trash and wood to fuel in internal combustion engines. The main source of dioxin today is open burning (which creates dioxin and many other pollutants whether or not vinyl is present). Many states have moved to ban open burning of trash. The good news is that U.S. dioxin levels have fallen consistently since the 1970s and continue to decline. During this time vinyl production has soared.

How is vinyl benefiting society?

Vinyl has many important, even life-saving, uses. As examples, it is the material of choice for blood bags and IV tubing, widely used in tamper-resistant packaging, the most commonly used wire insulating material, and a major source of piping to deliver safe drinking water.

Vinyl protects health and the environment at an affordable cost. Vinyl windows and siding are among the top, energy-saving remodeling choices for homeowners across the nation. Vinyl flooring and wall coverings, familiar to homeowners, are widely used in health care facilities because they are tough and can be cleaned easily, helping to prevent the spread of disease organisms.

All in all, vinyl brings value to life.

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